



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health  
Freedom of Information Office  
Building 31, Room 5B-35  
31 Center Drive, MSC 2107  
Bethesda, Maryland 20892-2107  
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via Email: [foia@sirillp.com](mailto:foia@sirillp.com)

June 15, 2022

Aaron Siri, Esq.  
Siri & Glimstad LLP  
200 Park Avenue  
Seventeenth Floor  
New York, NY 10166

Re: NIH FOIA Case No. 54107; *ICAN v. National Institutes of Health*, No. 20-cv-01277

Dear Mr. Siri:

This is a partial response to Freedom of Information Act (FOIA) requests that are the subject of the Complaint filed in *ICAN v. National Institutes of Health*, No. 20-cv-01277. Your FOIA request, dated April 29, 2020, was received by the National Institutes of Health (NIH) on the same day.

You requested the following for the timeframe of November 1, 2019 through the date of the search for:

All emails sent or received by Barney Graham that include the term SARS-CoV, COVID, COVID-19 or coronavirus in any portion of the email, including the body, subject, metadata, sender line, or recipient line of the email, or any attachment to the email.

NIH has processed 302 pages responsive to your request 54107. Attached to this letter are 280 pages; NIH has sent the remaining 22 pages to the Centers for Disease Control, the Department of Defense and the Department of Health and Human Services for further review. NIH will provide a further response regarding the consulted material once the consultations are complete. Also attached are 35 pages of returned consults from the April 2022 production.

I have determined to withhold portions of the enclosed pages under FOIA exemptions (b)(4), (b)(5) and (b)(6). The information being withheld is protected from release pursuant to Exemptions 4, 5, and 6 of the FOIA, 5 U.S.C. § 552 (b)(4), (b)(5) and (b)(6); and sections 5.31 (d), (e) and (f) of the HHS FOIA Regulations, 45 CFR Part 5. Exemption 4 protects from disclosure trade secrets and commercial or financial information that is privileged and

confidential. Exemption 5 permits the withholding of internal government records which are pre-decisional and contain staff advice, opinion, and recommendations, as well as documents solicited and received by the President or his immediate White House advisers who have broad and significant responsibility for investigating and formulating the advice to be given to the President. Exemption 6 permits the withholding of privacy information, the release of which would constitute a clearly unwarranted invasion of personal privacy.

If you have any questions about this response, please contact AUSA Morrison, of the Department of Justice, at [Kristina.Morrison@usdoj.gov](mailto:Kristina.Morrison@usdoj.gov).

Sincerely,

*for* Gorka Garcia-Malene  
Freedom of Information Officer, NIH



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 5 Apr 2020 20:52:01 +0000  
**To:** McCurdy, Lewis  
**Subject:** Re: Convalescent serum

I think it's very unlikely for serum or plasma therapy to make it worse. The strength of antibody response is almost always related to antigen load. I suspect the large viral load that makes people sick is also what makes them have a strong antibody response.

Hope you and your family are doing well and weathering the storm.

Take care,

Barney

Sent from my iPhone

On Apr 5, 2020, at 4:48 PM, McCurdy, Lewis <(b) (6)> wrote:

Hello Dr. Graham, we are trying to look at all avenues for therapy for our coronavirus infected patients. We are engaging our local Red Cross this week to look into convalescent serum. Trying to look at some of the emerging data from China and it appears that those with severe illness have higher antibodies and perhaps earlier development. Certainly we do not want to do harm to people by using serum as therapy. Didn't know if you had initial thoughts on its benefit or potential harm

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 22:07:16 +0000  
**To:** Young, Monique (NIH/VRC) [E]  
**Subject:** FW: Global Preparedness Monitoring Board

FYI. For noon on the 16<sup>th</sup>.

BG

---

**From:** Keusch, Gerald T (b) (6)  
**Sent:** Monday, March 9, 2020 6:05 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6)  
**Cc:** (b) (6); Pavlin, Julie (b) (6)>; Goodtree, Hannah (b) (6)>; Suhana, Tina (NIH/VRC) [E] (b) (6); Young, Monique (NIH/VRC) [E] (b) (6)>; Austin, Sarah (NIH/NIAID) [E] (b) (6)>  
**Subject:** RE: Global Preparedness Monitoring Board

Thanks to both of you,

I'm flying in to DC so that Nicki and I have a series of meeting with some of the key players we hope to talk with. The timing was set up to permit us to come to the NIH campus on the 16<sup>th</sup> to meet with Tony. That has created the opportunity to meet with you in person as well, even if it turns out Barney would be on the phone. So yes, the optimal time for us is at noon, before we see Tony. We are also going to catch up with Cliff Lane after that, although that will be back in DC where he is giving a talk.

Hannah will be in touch with you regarding details.

Thanks so much for making time to meet, and we greatly appreciate it.

Jerry

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Sent:** Monday, March 9, 2020 5:38 PM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6); Keusch, Gerald T (b) (6)>  
**Cc:** (b) (6); Pavlin, Julie (b) (6)>; Goodtree, Hannah (b) (6)>; Suhana, Tina (NIH/VRC) [E] (b) (6)>; Young, Monique (NIH/VRC) [E] (b) (6)>; Austin, Sarah (NIH/NIAID) [E] (b) (6)>  
**Subject:** RE: Global Preparedness Monitoring Board

Unfortunately, I will not be here on the 16<sup>th</sup>, but could probably join by phone.

Barney

---

**From:** Mascola, John (NIH/VRC) [E] (b) (6)>  
**Sent:** Monday, March 9, 2020 5:34 PM  
**To:** Keusch, Gerald T <(b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** (b) (6); Pavlin, Julie (b) (6)>; Goodtree, Hannah (b) (6)>; Suhana, Tina (NIH/VRC) [E] (b) (6)>; Young, Monique (NIH/VRC) [E] (b) (6)>; Austin, Sarah (NIH/NIAID) [E] (b) (6)>  
**Subject:** RE: Global Preparedness Monitoring Board

Hi Jerry,

Sure, we'd be happy to talk. Are you suggesting Monday 3/16 face to face – Or we could talk by phone before that.

Best,  
John

---

**From:** Keusch, Gerald T (b) (6)>  
**Sent:** Friday, March 6, 2020 5:58 PM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** (b) (6); Pavlin, Julie (b) (6); Goodtree, Hannah (b) (6)>  
**Subject:** Global Preparedness Monitoring Board

Dear John and Barney,

Nicki Lurie and I have recently been tasked by Victor Dzau to prepare a report on R&D for pandemic emerging infections, which is due by mid-April. We are in the process of meeting with key people here and abroad, sometimes in person or by conference call. We do understand how busy everybody is with the coronavirus outbreak on top of everything else they have responsibility for. We are meeting with Tony on Monday March 16 at 1:30, when I will be in DC to join Nicki there. We would very much like to meet with one of you, and ideally with both, before we see Tony, perhaps at noon or 12:30. We will be catching up with Cliff Lane back in DC after we see Tony so we won't be able to meet in later in the afternoon. Hannah Goodtree at NAM, who works with Julie Pavlin, will most likely join Nicki and me for these meetings.

Is this possible for you? Thanks for considering it.

Best regards, Jerry

Gerald T. Keusch, M.D.

Professor of Medicine and International Health  
Boston University School of Medicine  
Associate Director, National Emerging Infectious Diseases Laboratories  
620 Albany Street  
Boston, MA 02118

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 24 Mar 2020 21:18:54 +0000  
**To:** DANIEL Soizic  
**Cc:** BERTHIER Franck; LACOSTE Francois; Corbett, Kizzmekia (NIH/VRC) [E]; Alvarado, Gabriela (NIH/VRC) [C]; Stein, Judy (NIH/VRC) [C]  
**Subject:** Re: Introduction bioMerieux and NIH/NIAID for CoV antibodies  
**Attachments:** image001.png

Thank you for your interest. We are willing to share the (b) (4) and I have copied the people here who can facilitate the process. It may be easier to start the forms from our side.

Best wishes,

Barney

Sent from my iPhone

On Mar 24, 2020, at 4:31 PM, DANIEL Soizic (b) (6) wrote:

Dear Dr Graham,

Thank you very much for the very interesting conversation we had yesterday.

My understanding is that you have at your disposal a (b) (4) (b) (4)

(b) (4) As discussed, (b) (4)

Also, would it be possible to (b) (4)

(b) (4) It would be for research use only at this stage. If you agree, I will send you a MTA.

Please, do not hesitate to come back to us if you need more information.

I am looking forward to hearing from you.

Kind regards,



Soizic

<image001.png>

**Soizic Daniel, PhD**  
bioMérieux - R&D (b) (4)  
Senior Manager bioMolecule Engineering  
(b) (6)  
Tel: (b) (6) | Fax: +33 (0)4 78 87 76 53  
[www.biomerieux.com](http://www.biomerieux.com)

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**De :** LACOSTE Francois

**Envoyé :** lundi 23 mars 2020 14:14

**À :** Graham, Barney (NIH/VRC) [E]

**Cc :** Corbett, Kizzmekia (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]; Mascola, John (NIH/VRC) [E];  
Stephane Bancel; BERTHIER Franck; DANIEL Soizic

**Objet :** RE: Introduction bioMérieux and NIH/NIAID for CoV antibodies

Thank you Barney, 8:30 CET is fine for bioMérieux. I will attend the call with two colleagues from R&D

(b) (4)

Best regards

François

---

**De :** Graham, Barney (NIH/VRC) [E] (b) (6) >

**Envoyé :** lundi 23 mars 2020 13:48

**À :** LACOSTE Francois <(b) (6)>

**Cc :** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >; Stein, Judy (NIH/VRC) [C]  
(b) (6) Mascola, John (NIH/VRC) [E] (b) (6) Stephane Bancel

<(b) (6)>

**Objet :** RE: Introduction bioMérieux and NIH/NIAID for CoV antibodies

### External Email

I can meet at 4:30 PM EDT (8:30 CET) with Dr. Corbett to discuss (b) (4) I think that is all we need to get started.

We are now on daylight savings time, so should be only 5 hours difference.

Barney

---

**From:** LACOSTE Francois (b) (6) >  
**Sent:** Monday, March 23, 2020 7:48 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6); Stein, Judy (NIH/VRC) [C] (b) (6); Mascola, John (NIH/VRC) [E] (b) (6); Stephane Bancel (b) (6) >  
**Subject:** RE: Introduction bioMerieux and NIH/NIAID for CoV antibodies

Thank you Stephane and Graham for your quick reaction, Graham would you be available today for a call today to introduce the topic and discuss the scientific aspect on (b) (4) ?  
I propose either 3 or 3.30 pm (EST) , 9 or 9.30 pm (CET)  
Best regards

François

---

**De :** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Envoyé :** dimanche 22 mars 2020 23:10  
**À :** Stephane Bancel (b) (6); LACOSTE Francois (b) (6) >  
**Cc :** Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>; Stein, Judy (NIH/VRC) [C] (b) (6); Mascola, John (NIH/VRC) [E] (b) (6) >  
**Objet :** RE: Introduction bioMerieux and NIH/NIAID for CoV antibodies

#### External Email

Thanks Stephane,

Francois, we are glad to share the (b) (4) .  
We can send it (b) (4) We can also send you (b) (4) (b) (4) but you certainly have your own way of doing things.

Dr. Corbett is the scientific lead on this program and Judy Stein managed Tech Transfer for VRC.

Take care,

Barney

---

**From:** Stephane Bancel <(b) (6)>  
**Sent:** Sunday, March 22, 2020 5:02 PM  
**To:** Francois LACOSTE (b) (6) >; Graham, Barney (NIH/VRC) [E]

(b) (6)>

**Subject:** Introduction bioMerieux and NIH/NIAID for CoV antibodies

Barney,

Let me introduce you to Francois who runs R&D at biomerieux

They have the (b) (4) in the world, and would like to (b) (4) on it very rapidly

I leave it to both of you

Cheers

Stephane

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 14 Mar 2020 11:57:58 +0000  
**To:** Routh, Jennifer (NIH/NIAID) [E]; Roberts, Chris (NIH/NIAID) [E]; Kathleen Neuzil; Corbett, Kizzmekia (NIH/VRC) [E]; Morabito, Kaitlyn (NIH/VRC) [E]; Schuster, Claire (NIH/NIAID) [E]; Marston, Hilary (NIH/NIAID) [E]; Beigel, John (NIH) [E]; Makhene, Mamodikoe (NIH/NIAID) [E]; Pikaart-Tautges, Rhonda (NIH/NIAID) [E]; Lisa A. Jackson; Abbey, Lillian (NIH/NIAID) [E]; Bok, Karin (NIH/VRC) [E]; Kathleen Neuzil  
**Cc:** Stover, Kathy (NIH/NIAID) [E]  
**Subject:** RE: IMPT: mRNA-1273 Communication and trial questions and talking points  
**Attachments:** EXTENDED mRNA phase 1 talking points\_BG.docx

Thanks Jen. This was very well done.

Attached are my edits and comments. Feel free to simplify what I added.

Barney

---

**From:** Routh, Jennifer (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, March 13, 2020 11:14 PM  
**To:** Roberts, Chris (NIH/NIAID) [E] (b) (6); Kathleen Neuzil (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6); Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Schuster, Claire (NIH/NIAID) [E] (b) (6); Marston, Hilary (NIH/NIAID) [E] (b) (6); Beigel, John (NIH) [E] (b) (6); Makhene, Mamodikoe (NIH/NIAID) [E] (b) (6); Pikaart-Tautges, Rhonda (NIH/NIAID) [E] (b) (6); Lisa A. Jackson (b) (6); Abbey, Lillian (NIH/NIAID) [E] (b) (6); Bok, Karin (NIH/VRC) [E] (b) (6); Kathleen Neuzil (b) (6)  
**Cc:** Stover, Kathy (NIH/NIAID) [E] (b) (6)  
**Subject:** RE: IMPT: mRNA-1273 Communication and trial questions and talking points

All –

Attached is an updated talking points document based on our discussion and your feedback. Please let me know if anything still looks off or incorrect. Thanks again for your help.

To reiterate again – this document should not be shared with media. It is meant to help with interview prep and guide responses to reporters.

-Jen

Jennifer Routh [E]  
News and Science Writing Branch  
Office of Communications and Government Relations

National Institute of Allergy and Infectious Diseases (NIAID)  
NIH/HHS  
31 Center Drive Room 7A17C  
Bethesda, MD 20892

Direct: (b) (6)

(b) (6)

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**From:** Roberts, Chris (NIH/NIAID) [E] <(b) (6)>

**Sent:** Friday, March 13, 2020 12:13 PM

**To:** Kathleen Neuzil (b) (6)>; Graham, Barney (NIH/VRC) [E]  
(b) (6)>; Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>; Morabito,  
Kaitlyn (NIH/VRC) [E] (b) (6); Routh, Jennifer (NIH/NIAID) [E]  
(b) (6); Schuster, Claire (NIH/NIAID) [E] <(b) (6)>; Marston, Hilary  
(NIH/NIAID) [E] (b) (6)>; Beigel, John (NIH) [E] (b) (6)>; Makhene,  
Mamodikoe (NIH/NIAID) [E] (b) (6)>; Pikaart-Tautges, Rhonda (NIH/NIAID) [E]  
(b) (6); Lisa A. Jackson (b) (6)>; Abbey, Lillian (NIH/NIAID) [E]  
(b) (6)>; Bok, Karin (NIH/VRC) [E] (b) (6)>; Kathleen Neuzil  
(b) (6)>

**Subject:** IMPT: mRNA-1273 Communication and trial questions and talking points

Hi All,

Just a reminder to send Jenn Routh your comments/edits on the talking points and vaccine safety webpage by 2 pm today if at all possible. Remember, these are internal documents only.

Thanks

Chris

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 19 Mar 2020 02:28:25 +0000  
**To:** Young, Monique (NIH/VRC) [E]  
**Subject:** Fwd: Human Vaccines Project | Scientific Steering Committee | Virtual Meeting  
on June 16, 2020

FYI.

BG

Sent from my iPhone

Begin forwarded message:

**From:** Sandi Glass <(b) (6)>  
**Date:** March 18, 2020 at 12:40:50 PM EDT  
**To:** "David Baker" (b) (6)  
(b) (6)  
(b) (6), michel De Wilde <(b) (6)>, "Graham,  
Barney (NIH/VRC) [E]" (b) (6) "Jeff Hammerbacher  
(b) (6)>, Jason Paragas  
(b) (6)>, "Bali Pulendran" (b) (6)  
" (b) (6) "Robins, Harlan S"  
(b) (6), "Rotrosen, Daniel (NIH/NIAID) [E]" <(b) (6)>,  
"Tsang, John (NIH/NIAID) [E]" (b) (6)  
(b) (6) Dan Wattendorf (b) (6), Andrea Carfi  
(b) (6), "Hanneke Schuitemaker" (b) (6)  
(b) (6)  
(b) (6)>, "SWAMINATHAN, Soumya"  
(b) (6) "Jansen, Kathrin" (b) (6),  
(b) (6)  
**Cc:** Wayne Koff (b) (6), Theodore Schenkelberg  
(b) (6)>, Jaap Goudsmit  
(b) (6), Sabrina Welsh  
(b) (6), "Boston, Gerald (NIH/NIAID) [E]"  
(b) (6), "Graham, Barney (NIH/VRC) [E]" (b) (6), Isabel  
Ramsey (b) (6), "Mahulkar, Nikita Mitish"  
(b) (6)>,  
Wouter Koudstaal (b) (6) Leslie Stark (b) (6)  
**Subject:** Human Vaccines Project | Scientific Steering Committee | Virtual Meeting on  
June 16, 2020

Dear Scientific Steering Committee Members,

In consideration of escalating COVID-19 developments, the Scientific Steering Committee meeting scheduled for June 16, 2020 at the UCLA Luskin Conference Center in Los Angeles, California, has been restructured.

In lieu of an in-person gathering, preparations are being made for a condensed virtual meeting lasting approximately 4-hours on Tuesday, June 16, 2020. Please keep this day open on your calendars and note, to accommodate international members and PIs, the virtual meeting will likely begin around 9 or 9:30 am EDT. A Placeholder for the virtual meeting will be forthcoming.

On behalf of the Human Vaccines Project, we wish everyone the best during these challenging times.

My best, *Sandi*

Sandi Glass | Human Vaccines Project | (b) (6)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 11 Apr 2020 15:39:25 +0000  
**To:** [REDACTED] (b) (6)  
**Cc:** [REDACTED] (b) (6)  
[REDACTED] (b) (6)  
**Subject:** RE: Coronavirus Info from Men's Bible Study

Dear Men,

When I sent the handout from the coronavirus presentation it had the wrong email address for contacting the clinical trial site in Bethesda that will be doing the vaccine study in people above 55 yo. This is at the Vaccine Evaluation Clinic in the NIH Clinical Center run by our group at the NIAID Vaccine Research Center.

The correct address is: [VRCCOVIDTrials@nih.gov](mailto:VRCCOVIDTrials@nih.gov) or you can also use the generic clinic email address: [Vaccines@nih.gov](mailto:Vaccines@nih.gov) If you want to call the number is 1-866-833-LIFE (5433)

Take care,

Barney



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 18 Apr 2020 14:04:37 +0000  
**To:** Pierson, Theodore (NIH/NIAID) [E]  
**Subject:** RE: CHM Form piece: SARS-CoV-2 vaccine development

Hi Ted,

I just read your review paper. Very informative and well written. I didn't see anything to comment on. It would be nice perhaps to put in a plug for the prototype pathogen approach for pandemic preparedness and response that is the basis for the rapid Moderna response and the widespread use of the S-2P stabilizing mutation.

Graham BS, Sullivan NJ. Emerging viral diseases from a vaccinology perspective: preparing for the next pandemic. Nat Immunol. 2018 Jan;19(1):20-28. doi: 10.1038/s41590-017-0007-9.

Thanks for sharing.

Take care,

Barney

---

**From:** Pierson, Theodore (NIH/NIAID) [E] (b) (6)  
**Sent:** Tuesday, April 14, 2020 5:10 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Subject:** CHM Form piece: SARS-CoV-2 vaccine development

Hi Barney,

Hope this note finds you well during busy times. As mentioned when we spoke last, Mike Diamond and I were asked to comment on the state of SARS-CoV-2 vaccines. Attached is a complete draft of a short "Forum" piece composed for Cell Host and Microbe. We wrote about the unusual challenges of vaccine development during a pandemic and the important role information about prototype pathogens have accelerating progress under these circumstances.

It is due at the end of the week and we will edit and polish a bit more (working on the figure now). Before submission, I wanted to share to give you the opportunity to comment (if time permits). It is certainly not my intention for any of my words or ideas to make your job or Tony's more difficult- it is remarkable how complicated this science has become by other issues.

Three options:

1. If too busy- absolutely no worries!
2. Take a quick peak to identify any red flags for Mike and I to think about.

3. Make some edits- we are happy to include you as an author here.

Cheers,

T



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 16 Apr 2020 21:52:29 +0000  
**To:** Gemma Alderton  
**Cc:** awynn@aaas.org  
**Subject:** RE: Preparing a Perspective for Science ID abb8923  
**Attachments:** Risk-benefit for COVID-19 Science 2020 \_final.docx

Dear Dr. Alderton,

I have attached the perspective here and I will also go into the web site and submit later tonight.

This short perspective could have had dozens of references, but I have added none. Let me know if you would like me to add references, but it would be hard to add one without all the rest.

Thank you for the opportunity to publish by perspectives.

Best wishes and take care,

Barney

\*\*\*\*\*

Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center  
Chief, Viral Pathogenesis Laboratory  
National Institute of Allergy and Infectious Diseases, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502  
Bethesda, MD 20892-3017  
Phone: (b) (6)  
URL: <https://www.niaid.nih.gov/research/barney-graham-md-phd>

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-----Original Message-----

From: Gemma Alderton <galderton@science-int.co.uk>  
Sent: Tuesday, April 14, 2020 9:25 AM  
To: Graham, Barney (NIH/VRC) [E] (b) (6)  
Cc: awynn@aaas.org  
Subject: RE: Preparing a Perspective for Science ID abb8923

Great, thank you!

Gemma K. Alderton, PhD  
Senior Editor, Science

AAAS Science International, Inc.  
E: [galderton@science-int.co.uk](mailto:galderton@science-int.co.uk)  
[www.sciencemag.org](http://www.sciencemag.org)  
[cts.sciencemag.org](http://cts.sciencemag.org)

Follow me on Twitter: [@AldertonBiol](https://twitter.com/AldertonBiol)

-----Original Message-----

From: Graham, Barney (NIH/VRC) [E] [REDACTED] (b) (6)  
Sent: 14 April 2020 14:23  
To: Gemma Alderton <[galderton@science-int.co.uk](mailto:galderton@science-int.co.uk)>  
Cc: [awynn@aaas.org](mailto:awynn@aaas.org)  
Subject: Re: Preparing a Perspective for Science ID abb8923

I should be able to send tomorrow.

Barney

Sent from my iPhone

> On Apr 14, 2020, at 7:42 AM, Gemma Alderton <[galderton@science-int.co.uk](mailto:galderton@science-int.co.uk)> wrote:  
>  
> Dear Barney,  
>  
> I hope all is well with you. I just want to check that you are going to be able to submit your Perspective tomorrow? Please let me know how you are getting on and if you need more time.  
>  
> Best wishes,  
> Gemma  
>  
>  
> Gemma K. Alderton, PhD  
> Senior Editor, Science  
>  
> AAAS Science International, Inc.  
> E: [galderton@science-int.co.uk](mailto:galderton@science-int.co.uk)  
> [www.sciencemag.org](http://www.sciencemag.org)  
> [cts.sciencemag.org](http://cts.sciencemag.org)  
>  
> Follow me on Twitter: [@AldertonBiol](https://twitter.com/AldertonBiol)  
>  
> -----Original Message-----  
> From: Anita Wynn <[science\\_editors@aaas.org](mailto:science_editors@aaas.org)>  
> Sent: 25 March 2020 12:26  
> To: [REDACTED] (b) (6)  
> Cc: [awynn@aaas.org](mailto:awynn@aaas.org); Gemma Alderton <[galderton@science-int.co.uk](mailto:galderton@science-int.co.uk)>  
> Subject: Preparing a Perspective for Science ID abb8923  
>  
> 25-Mar-2020  
>  
> Dear Dr. Graham,  
>  
> Manuscript number: abb8923

>  
> Thank you for agreeing to write a Perspective for Science on SARS-CoV-2 vaccine development.  
>  
> Your paper is due at Science by 15-Apr-2020. If for some reason you find that you will not be able to meet this deadline, please let us know as soon as possible.  
>  
> When you are ready to submit your paper, please log in to your account at our Manuscript Submission and Information Portal <https://cts.sciencemag.org>. This solicited manuscript will appear on your task list. You can access the manuscript record by clicking on the Action button to the right of the paper in your task list. Navigate between tabs to complete your manuscript record and upload documents.  
>  
> I look forward to receiving your manuscript. Please let me know if I can be of assistance.  
>  
> Sincerely,  
>  
> Gemma Alderton, Ph.D.  
> Senior Editor  
> [galderton@science-int.co.uk](mailto:galderton@science-int.co.uk)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 2 Apr 2020 17:35:29 +0000  
**To:** Royal, Thomas (NIH/NIAID) [E]  
**Subject:** Re: COVID-19

They might be thinking that your shoes may pick up viruses on environmental surfaces. I think transferring a virus from your shoe to a surface you would touch With your hand and then transfer that to your face is pretty unlikely.

Barney

Sent from my iPhone

On Apr 1, 2020, at 1:06 PM, Royal, Thomas (NIH/NIAID) [E] (b) (6) > wrote:

Dr. Graham,

I'm just curious, I have heard people say you need to remove your shoes now and leave them outdoors, why is that?

Thomas E. Royal Jr.  
Deputy Chief, VAMB, VRC, NIAID  
40 Convent Drive, Bethesda, MD 20892  
Phone: (b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 12 Feb 2020 08:15:22 +0000  
**To:** Ziwawo, Cynthia (NIH/VRC) [F]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: Abstracts... FW: NIDO2020 Symposium: Call for abstracts and registration open

Thanks Cynthia.

---

**From:** Ziwawo, Cynthia (NIH/VRC) [F] (b) (6) >  
**Sent:** Tuesday, February 11, 2020 2:00 PM  
**To:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6)  
**Subject:** RE: Abstracts... FW: NIDO2020 Symposium: Call for abstracts and registration open

Hello all,

I just wanted to let you know that I will not be attending Nido2020 because a (b) (6) (b) (6) that weekend!

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
**Sent:** Tuesday, February 11, 2020 9:12 AM  
**To:** Wang, Lingshu (NIH/VRC) [E] <(b) (6)>; Abiona, Olubukola (NIH/VRC) [F] (b) (6); Kong, Wing-Pui (NIH/VRC) [E] (b) (6); Hutchinson, Geoffrey (NIH/VRC) [F] (b) (6); Ziwawo, Cynthia (NIH/VRC) [F] (b) (6) >  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6); Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >  
**Subject:** Abstracts... FW: NIDO2020 Symposium: Call for abstracts and registration open

Dr. Graham and I are trying to get a sense of who is going to this meeting and what they are presenting... If you are planning to go, let me know so I can make a list. Also, Abstracts are due on the 28<sup>th</sup>.

Geoffrey and Olu, I got yours already in my head.

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center

National Institutes of Allergy and Infectious Diseases

National Institutes of Health

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892



Laboratory: (b) (6)

Personal: (b) (6)

Fax: (301) 480-2771

---

**From:** Astrid Smarius <[a.smarius@congresscompany.com](mailto:a.smarius@congresscompany.com)>

**Date:** Monday, December 2, 2019 at 3:31 PM

**Subject:** NIDO2020 Symposium: Call for abstracts and registration open



Dear all,

From today on you can [submit your abstract](#) and [register](#) for the NIDO2020 meeting, which, as you know, will take place in Egmond aan Zee, the Netherlands, May 10-14 next year. Don't miss out and secure your place now and take benefit from the early bird registration fee!

In the preliminary program on the website you will see invited speakers and session chairs announced, and of course more speakers will be selected from the abstracts you submit (deadline Feb 28, 2020). In order to give a maximum number of researchers a chance to present their research, there will be a combination of regular talks and short pitches (flash presentations). There will also be ample opportunity to meet your peers and exchange ideas during lively poster sessions, which will give your research the podium it deserves.

We wish to attract as many young researchers as possible. To encourage their congress participation, we offer a discount on the registration fee for graduate students. Moreover, NIDO2020 is selected by the Federation of European Microbiological Societies (FEMS) to offer travel grants to Early Stage Researchers. Please check the website for the [application procedure](#).

We kindly request you to make your hotel reservation at the symposium venue: we have negotiated very favorable room prices, so there is no need to look for other accommodations. The hotel has wonderful leisure facilities including a large swimming pool and spacious spa centre! There will be attractive options for extra nights before and after the meeting to customize your stay. Check the details on the [website](#) and book your rooms during the registration process.

International attendees who require an invitation letter for their visa application are encouraged to register early. Please tick the appropriate box on the registration page to request a Letter of Invitation to NIDO2020.

Finally, a shuttle bus service will be available from Schiphol international airport to Egmond aan Zee and back for a reasonable price, while there are alternative options using public transport or regular taxi services. Check out the site and book your shuttle bus seat during the registration process.

We are tremendously looking forward to welcoming you at the meeting, so check out the [conference website](#), submit your abstract and register for this exciting Nidovirus symposium!

Best wishes, and see you there!

Berend-Jan Bosch, Bart Haagmans and Marjolein Kikkert



***XV<sup>th</sup> International Nidovirus symposium***

***May 10-14, 2020 - Egmond aan Zee - The Netherlands***

***Meeting website: [www.nido2020.com](http://www.nido2020.com)***

If you have any queries about this symposium, please contact our conference organizer Astrid Smarius from Congress Company via e-mail ([nido2020@congresscompany.com](mailto:nido2020@congresscompany.com)).

**From:** (b) (6)  
**Sent:** Sat, 28 Mar 2020 17:35:40 -0400  
**To:** Giuseppe Ciaramella  
**Cc:** Yuko Helffrich; Leah Socci; Young, Monique (NIH/VRC) [E]  
**Subject:** RE: CoV  
**Attachments:** GRAHAM - Short bio 2020 V2.docx, ATT00001.htm

Hi Pino,

The title is, "Prototype Pathogen Approach to Pandemic Preparedness"

I've attached a brief bio. I look forward to meeting your group.

Take care,

Barney

---

**From:** Giuseppe Ciaramella <gciaramella@beamtx.com>  
**Sent:** Friday, March 27, 2020 3:17 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Cc:** Yuko Helffrich <yhelffrich@beamtx.com>; Leah Socci <lsocci@beamtx.com>; Young, Monique (NIH/VRC) [E] <(b) (6)>  
**Subject:** Re: CoV

Barney,

I hope you are keeping safe from Covid. Thank you very much for giving a Zoom lecture on Covid and the vaccine strategy next week. We are all looking forward to it. Do you have a Bio and a presentation title that you could send me? I'd like to circulate to our scientists as a way of introduction.

Thanks again and have a great week end.

Pino

---

**From:** "Graham, Barney (NIH/VRC) [E]" <(b) (6)>  
**Date:** Friday, March 6, 2020 at 1:35 PM  
**To:** Giuseppe Ciaramella <[gciaramella@beamtx.com](mailto:gciaramella@beamtx.com)>, Giuseppe Ciaramella (b) (6)  
**Cc:** Yuko Helffrich <[yhelffrich@beamtx.com](mailto:yhelffrich@beamtx.com)>, Leah Socci <[lsocci@beamtx.com](mailto:lsocci@beamtx.com)>, "Young, Monique (NIH/VRC) [E]" <(b) (6)>  
**Subject:** RE: CoV

Hi Monique,

Could you find an hour for a videoconference with this group?



Thanks,

BG

---

**From:** Giuseppe Ciaramella <[gciaramella@beamtx.com](mailto:gciaramella@beamtx.com)>  
**Sent:** Thursday, March 5, 2020 4:16 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>; Giuseppe Ciaramella <(b) (6)>  
**Cc:** Yuko Helffrich <[yhelffrich@beamtx.com](mailto:yhelffrich@beamtx.com)>; Leah Socci <[lsocci@beamtx.com](mailto:lsocci@beamtx.com)>  
**Subject:** Re: CoV

Hi Barney,

Thank you very much for your quick response. A videoconference would be great. When would you be available? Yuko and Leah can help with the logistics.

Best wishes,

Pino

On 3/5/20, 3:29 PM, "Graham, Barney (NIH/VRC) [E]" <(b) (6)> wrote:

Hi Pino,

Thanks for reaching out. I am supposed to go to Boston to visit Gates MRI but probably not until August. Several trips have been canceled, but others are popping up for WHO, etc. It's going to be hard to schedule anything in the near term because of the coronavirus efforts.

I could squeeze in a videoteleconference if that would be useful.

Best wishes,

Barney

-----Original Message-----

**From:** Giuseppe Ciaramella <(b) (6)>  
**Sent:** Thursday, March 5, 2020 1:03 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Cc:** [gciaramella@beamtx.com](mailto:gciaramella@beamtx.com)  
**Subject:** Re: CoV

Hi Barney,

Any chance you will be in Boston any time soon? Scientists at my company are interested in hearing about Coronavirus and vaccine development and was wondering whether you'd be interested in giving a talk at Beam. You could also get to see where we are and what we are up to in the gene editing world. We'd be obviously happy to cover expenses.

Best,  
Pino

Sent from my iPhone

> On Feb 2, 2020, at 15:22, Graham, Barney (NIH/VRC) [E] (b) (6) wrote:  
>

Hi Pino,

Nice to hear from you. Sorry to lose you from vaccine work, but you got a lot of good projects started.

nCoV is closer to SARS than to MERS, but the spike structure is highly conserved and the same stabilizing mutations work in all beta-coronaviruses. Everything is moving quickly because of the preliminary work that was done with MERS.

Barney

Sent from my iPhone

> On Feb 2, 2020, at 2:39 PM, Giuseppe Ciaramella (b) (6) wrote:  
>

> Hi Barney,

> I hope all is well. As you know I moved to a gene editing company 2 years ago and no longer working on vaccines but glad to see that you guys are still working with Moderna to tackle nCoV19. I have not looked at the genome sequence but, out of curiosity, is it looking similar to MERS ?

> Best of luck for the vaccine and I hope we bump into each other at some point.

> Pino

>

>

> Sent from my iPhone

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 28 Feb 2020 15:54:23 +0000  
**To:** Madinina Cox  
**Subject:** RE: IABS\_New paths for sustainable solutions to tackle global and emerging infectious threats\_Speaker slides available  
**Attachments:** Precision vaccinology for sharing.pdf

Thank you for the link. I noticed my slides were not there. You can use this pdf version if you wish.

Barney

---

**From:** Madinina Cox <madinina.cox@iabs.org>  
**Sent:** Friday, February 28, 2020 10:15 AM  
**To:** madinina.cox@iabs.org  
**Cc:** Abigail Charlet | IABS <abbie.charlet@iabs.org>; Philippe Sabot - IABS <philippe.sabot@iabs.org>  
**Subject:** IABS\_New paths for sustainable solutions to tackle global and emerging infectious threats\_Speaker slides available

Greetings!

First and foremost, *Thank You* very much for your participation in the **IABS 65<sup>th</sup> Anniversary Scientific Conference "New Paths for Sustainable Solutions to Tackle Global and Emerging Infectious Threats"** during the past few days. We sincerely hope that you found the meeting to be of value and benefit to the important work you do.

The speaker slides are available for viewing. To access the slides, please follow these steps :

- Use this link : <https://65.iabs.org>
- Click on Conference Information, and then Meeting slides
- Enter :
  - Username : (b) (6)
  - Password : (b) (6)
- Return to the 65th meeting website
- Click on Conference Information, and then Meeting slides

Kind reminder, could we ask that you take 5 minutes to share your thoughts and comments via the Survey that you will find here

=> <https://fr.surveymonkey.com/r/6SDTH85>

Thank you!

***With renewed thanks from all of us at IABS,***

Kind regards,

---

**Madinina Cox**

IABS 65th anniversary Meeting Coordinator  
MC'Com for IABS

IABS  
1, bd Vivier Merle  
La Tour Suisse  
69003 Lyon - France

Ph: [REDACTED] (b) (6)

[www.iabs.org](http://www.iabs.org)

Save the date: February 27th & 28th, 2020: IABS 65th Scientific Conference - Lyon "New Paths for sustainable solutions to tackle global and emerging infectious threats »



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 23 Apr 2020 23:34:04 +0000  
**To:** Denison, Mark (NIH);Kathy Edwards  
**Subject:** CoV lecture link

Hi Mark/Kathy,

I thought you all might enjoy this. NIH is sponsoring a series of COVID-19 talks. Mine was yesterday. They made the link public.

BG

---

**From:** Roberts, Jacqueline (NIH/OD) [E] (b) (6)  
**Sent:** Thursday, April 23, 2020 5:19 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6); Gottesman, Michael (NIH/OD) [E] (b) (6); Sereti, Irini (NIH/NIAID) [E] (b) (6) Wanjek, Christopher (NIH/OD) [E] (b) (6); Holland, Steven (NIH/NIAID) [E] (b) (6)>  
**Subject:** Re: Bravo!

Dr. Graham's archived lecture is now available: <https://videocast.nih.gov/watch=36377>

Jackie

---

**From:** "Graham, Barney (NIH/VRC) [E]" (b) (6)  
**Date:** Wednesday, April 22, 2020 at 5:23 PM  
**To:** "Gottesman, Michael (NIH/OD) [E]" (b) (6), "Sereti, Irini (NIH/NIAID) [E]" (b) (6), "Wanjek, Christopher (NIH/OD) [E]" (b) (6)  
"Roberts, Jacqueline (NIH/OD) [E]" (b) (6) "Holland, Steven (NIH/NIAID) [E]" (b) (6)>  
**Subject:** RE: Bravo!

Thank you all for making that happen. Hope it will be useful to others.

Take care,

Barney

---

**From:** Gottesman, Michael (NIH/OD) [E] (b) (6)  
**Sent:** Wednesday, April 22, 2020 4:00 PM  
**To:** Sereti, Irini (NIH/NIAID) [E] (b) (6); Graham, Barney (NIH/VRC) [E]

(b) (6)>; Wanjek, Christopher (NIH/OD) [E] (b) (6)>; Roberts,  
Jacqueline (NIH/OD) [E] (b) (6)>; Holland, Steven (NIH/NIAID) [E]  
(b) (6)

**Subject:** Bravo!

Another great lecture; seems as if there were several thousand watching and I'm sure more will tune in when this is archived tomorrow.

Technically, I think everything went well and the videocast looked fine.

Michael



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 15:12:54 +0000  
**To:** Kathleen Neuzil  
**Subject:** FW: [REDACTED] (b) (4)

FYI

BG

---

**From:** Roberts, Chris (NIH/NIAID) [E] [REDACTED] (b) (6)  
**Sent:** Sunday, March 8, 2020 6:01 PM  
**To:** Lisa A. Jackson [REDACTED] (b) (6)  
**Cc:** Graham, Barney (NIH/VRC) [E] [REDACTED] (b) (6); Beigel, John (NIH) [E] [REDACTED] (b) (6);> Nayak, Seema (NIH/NIAID) [E] [REDACTED] (b) (6); Buchanan, Wendy (NIH/NIAID) [E] [REDACTED] (b) (6); Makhene, Mamodikoe (NIH/NIAID) [E] [REDACTED] (b) (6); Barbara A. Carste <[REDACTED] (b) (6)>; Maya Dunstan [REDACTED] (b) (6)  
**Subject:** Re: [REDACTED] (b) (4)

Totally agree with the last two sentences, leave it up to you to modify, delete what you think is best for your site. Not sure [REDACTED] (b) (4). we will discuss internally in the am and get back to you.

Sent from my iPhone

On Mar 8, 2020, at 4:09 PM, Lisa A. Jackson <[REDACTED] (b) (6)> wrote:

Thanks Chris. The document that was attached is very helpful. Regarding the below draft ICF language, [REDACTED] (b) (4) We probably need to [REDACTED] (b) (4) [REDACTED] (b) (4).

Regarding the process, just to clarify, [REDACTED] (b) (4) [REDACTED] (b) (4)



(b) (4)

I don't believe I have (b) (4)?  
Lisa

---

**From:** Roberts, Chris (NIH/NIAID) [E] <(b) (6)>  
**Sent:** Sunday, March 8, 2020 12:08 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6); Beigel, John (NIH) [E] (b) (6); Nayak, Seema (NIH/NIAID) [E] (b) (6); Lisa A. Jackson (b) (6)  
**Cc:** Buchanan, Wendy (NIH/NIAID) [E] (b) (6); Makhene, Mamodikoe (NIH/NIAID) [E] (b) (6)  
**Subject:** Re: (b) (4)

**Caution:** This email came from outside Kaiser Permanente. Do not open attachments or click on links if you do not recognize the sender.

---

Thanks Barney for your comments, I have adopted your comments in the attached and incorporated the plans for VED assessment from your other VED commentary document as a more lay derived informational document.

Regarding the request (b) (4) Lisa  
likely can use (b) (4)  
(b) (4)

(b) (4)

Lisa, happy to schedule a call tomorrow to work through this. Let us know your thoughts.

Chris

---

**From:** "Graham, Barney (NIH/VRC) [E]" (b) (6) >  
**Date:** Saturday, March 7, 2020 at 11:11 AM  
**To:** "Roberts, Chris (NIH/NIAID) [E]" (b) (6) >, "Beigel, John (NIH) [E]" (b) (6), "Nayak, Seema (NIH/NIAID) [E]" (b) (6) >, "Lisa A. Jackson" (b) (6) >, "Erbelding, Emily (NIH/NIAID) [E]" (b) (6) >, "Lisa A. Jackson" (b) (6)  
**Cc:** "Buchanan, Wendy (NIH/NIAID) [E]" <(b) (6)>, "Makhene, Mamodikoe (NIH/NIAID) [E]" (b) (6)  
**Subject:** RE: (b) (4)

Thanks Chris,

I didn't see this before I just sent that last email. Your writing is much more accessible than mine. I made a few additional comments on your document in the margins.

(b) (4)

Barney

---

**From:** Roberts, Chris (NIH/NIAID) [E] (b) (6) >  
**Sent:** Friday, March 6, 2020 9:52 PM  
**To:** Beigel, John (NIH) [E] (b) (6) >; Nayak, Seema (NIH/NIAID) [E] (b) (6); Lisa A. Jackson <(b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6) >; Erbelding, Emily (NIH/NIAID) [E] (b) (6) >; Lisa A. Jackson (b) (6)  
**Cc:** Buchanan, Wendy (NIH/NIAID) [E] (b) (6) >; Makhene, Mamodikoe (NIH/NIAID) [E] (b) (6)  
**Subject:** Re: (b) (4)

See attached as a first attempt at an informational messaging document. Wordy and too much information, brain no longer functioning, but discusses some talking points that can be tweaked. I've included Barney and Emily, as she is likely to be asked questions by reporters tomorrow. Please edit/delete/add accordingly.

Chris

---

**From:** "Beigel, John (NIH) [E]" (b) (6) >  
**Date:** Friday, March 6, 2020 at 5:14 PM  
**To:** "Roberts, Chris (NIH/NIAID) [E]" (b) (6) >, "Nayak, Seema (NIH/NIAID) [E]"

(b) (6)>, "Lisa A. Jackson" (b) (6)  
**Cc:** "Buchanan, Wendy (NIH/NIAID) [E]" (b) (6) "Makhene, Mamodikoe  
(NIH/NIAID) [E]" (b) (6)>  
**Subject:** Re: (b) (4)

Chris, we have reporters now asking why (b) (4)  
(b) (4)

--  
**John Beigel, M.D.**

Associate Director for Clinical Research

Division of Microbiology and Infectious Diseases

National Institute of Allergy and Infectious Diseases (NIAID)

Phone: (b) (6)

email: (b) (6)

---

**From:** Chris Roberts (b) (6)>  
**Date:** Sunday, March 1, 2020 at 3:21 PM  
**To:** John Beigel (b) (6), Seema Nayak (b) (6)>, "Lisa A.  
Jackson" (b) (6)  
**Cc:** "Buchanan, Wendy (NIH/NIAID) [E]" <(b) (6)>, "Makhene, Mamodikoe  
(NIH/NIAID) [E]" (b) (6)>  
**Subject:** Re: (b) (4)

John,

I fully agree (b) (4)  
(b) (4)

Chris

---

**From:** "Beigel, John (NIH) [E]" (b) (6)>  
**Date:** Sunday, March 1, 2020 at 2:37 PM  
**To:** "Roberts, Chris (NIH/NIAID) [E]" (b) (6)>, "Nayak, Seema (NIH/NIAID) [E]"  
(b) (6)>, "Lisa A. Jackson" (b) (6)>  
**Cc:** "Buchanan, Wendy (NIH/NIAID) [E]" (b) (6), "Makhene, Mamodikoe  
(NIH/NIAID) [E]" (b) (6)  
**Subject:** Re: (b) (4)

I would view it slightly differently. I see (b) (4)

(b) (4)

So to me – (b) (4)  
(b) (4)

This is the third email about this topic this weekend, so we may want to write something up to send to the IRB and FDA so everyone understands the situation , our assessment, and the plan (not an amendment, just an information item of sorts).

John

--

**John Beigel, M.D.**

Associate Director for Clinical Research

Division of Microbiology and Infectious Diseases

National Institute of Allergy and Infectious Diseases (NIAID)

Phone: (b) (6)

email: (b) (6)

---

**From:** Chris Roberts <(b) (6)>

**Date:** Sunday, March 1, 2020 at 1:49 PM

**To:** John Beigel <(b) (6)>, Seema Nayak (b) (6)>, "Lisa A. Jackson" (b) (6)

**Cc:** "Buchanan, Wendy (NIH/NIAID) [E]" (b) (6), "Makhene, Mamodikoe (NIH/NIAID) [E]" (b) (6)

**Subject:** Re: (b) (4)

I agree and am also (b) (4)  
(b) (4)

(b) (4)

Chris

**From:** "Lisa A. Jackson" (b) (6)

**Date:** Sunday, March 1, 2020 at 11:15 AM

**To:** "Beigel, John (NIH) [E]" (b) (6) >, "Roberts, Chris (NIH/NIAID) [E]"

(b) (6) >, "Nayak, Seema (NIH/NIAID) [E]" (b) (6) >, "Buchanan, Wendy (NIH/NIAID) [E]" (b) (6) >

**Subject:** (b) (4)

(b) (4)

Lisa

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 1 May 2020 13:43:40 +0000  
**To:** Buchbinder, Barry (NIH/NIAID) [E]; Kwong, Peter (NIH/VRC) [E]  
**Cc:** Stein, Judy (NIH/VRC) [C]  
**Subject:** RE: (b) (4) -NIAID Research Collaboration Agreement (b) (4)  
(Dr. Barney Graham)

We have other (b) (5) choices that will work for our lab, so from my perspective, we can let it end.

Peter may still need it.

Barney

---

**From:** Buchbinder, Barry (NIH/NIAID) [E] (b) (6) >  
**Sent:** Friday, May 1, 2020 9:25 AM  
**To:** Kwong, Peter (NIH/VRC) [E] (b) (6) >; Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Cc:** Stein, Judy (NIH/VRC) [C] (b) (6) >  
**Subject:** FW: (b) (4) -NIAID Research Collaboration Agreement (b) (4) (Dr. Barney Graham)

Drs. Kwong & Graham,

This (b) (4), (b) (5)  
(b) (4), (b) (5)

Thank you,

- Barry

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<https://ned.nih.gov/search/ViewDetails.aspx?NIHID=0010146018>

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---

**From:** (b) (4) (b) (6), (b) (4) >  
**Sent:** Friday, May 1, 2020 7:46 AM  
**To:** Buchbinder, Barry (NIH/NIAID) [E] (b) (6) >  
**Subject:** (b) (4) -NIAID Research Collaboration Agreement (b) (4) (Dr. Barney Graham)

Hi Barry,



We worked together on

(b) (4)

(b) (4)

I can only imagine how busy you and your colleagues are at this time, but if you are able to send a draft (b) (4) to me for review in the near future it will be greatly appreciated. I'm just trying to stay on top of things like this amidst high-priority COVID-19 related matters.

Kind regards,

(b) (4), (b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 22 Mar 2020 09:49:05 +0000  
**To:** Pierre GSELL  
**Subject:** Accepted: Webex meeting invitation: [COVID-19] 5th TC Animal Models Expert Group

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 20 Mar 2020 12:43:58 +0000  
**To:** Marston, Hilary (NIH/NIAID) [E]; Morabito, Kaitlyn (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]; Alvarado, Gabriela (NIH/VRC) [C]  
**Subject:** RE (b) (5) SARS-2 Pathology

FYI. This is what I sent back to Cristina. Looks like there were two different email streams.

BG

Thanks Cristina.

(b) (5)

(b) (5)

Barney

---

**From:** Marston, Hilary (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, March 20, 2020 8:02 AM  
**To:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E]  
(b) (6) Bok, Karin (NIH/VRC) [E] (b) (6)  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Subject:** Re: (b) (5) SARS-2 Pathology

Yeah you'd want that and (b) (5) Cristina didn't have right now.

---

**From:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6)  
**Date:** Friday, March 20, 2020 at 8:00 AM  
**To:** "Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6), Hilary Marston  
(b) (6)>, Karin Bok (b) (6)  
**Cc:** "Graham, Barney (NIH/VRC) [E]" (b) (6)  
**Subject:** Re: (b) (5) SARS-2 Pathology

Hi Hilary,

Do they have (b) (5)?

Thanks,  
Kaitlyn

---

**From:** Kizzmekia Corbett (b) (6) >  
**Date:** Friday, March 20, 2020 at 7:56 AM  
**To:** Hilary Marston (b) (6) >, "Morabito, Kaitlyn (NIH/VRC) [E]"  
(b) (6) >, Karin Bok (b) (6)  
**Cc:** Barney Graham (b) (6) >  
**Subject:** Re: (b) (5) SARS-2 Pathology

Oh wow, (b) (5) (b) (5)  
(b) (5) Maybe I should let him comment. I can admit  
(b) (5)

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive  
Bethesda MD 20892  
Laboratory: (b) (6)  
Personal: (b) (6)  
Fax: (301) 480-2771

---

**From:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6)  
**Date:** Friday, March 20, 2020 at 7:54 AM  
**To:** Kizzmekia Corbett (b) (6) Kaitlyn Morabito  
(b) (6) >, "Bok, Karin (NIH/VRC) [E]" (b) (6)  
**Subject:** Re: (b) (5) SARS-2 Pathology

Per Cristina, (b) (5) She offered to set up a call (during weekend if easier) if you'd like

---

**From:** "Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6)  
**Date:** Friday, March 20, 2020 at 6:52 AM  
**To:** Hilary Marston (b) (6) >, "Morabito, Kaitlyn (NIH/VRC) [E]"

(b) (6)>, Karin Bok (b) (6)  
**Subject:** Re: (b) (5) SARS-2 Pathology

(b) (5)

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive  
Bethesda MD 20892  
Laboratory: (b) (6)  
Personal: (b) (6)  
Fax: (301) 480-2771

---

**From:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6)>  
**Date:** Thursday, March 19, 2020 at 10:07 PM  
**To:** Kaitlyn Morabito (b) (6)>, "Bok, Karin (NIH/VRC) [E]"  
(b) (6), Kizzmekia Corbett <(b) (6)>  
**Subject:** FW: (b) (5) SARS-2 Pathology

Figuring barney might not see for a bit, but welcome your thoughts

---

**From:** Cristina Cassetti (b) (6)>  
**Date:** Thursday, March 19, 2020 at 6:25 PM  
**To:** "Graham, Barney (NIH/VRC) [E]" (b) (6)>, Hilary Marston  
(b) (6)>  
**Cc:** Alan Embry (b) (6)>  
**Subject:** FW: (b) (5) SARS-2 Pathology

This is the early (b) (5) that from Miles Carroll at PHE has generated.  
This is confidential. I am happy to set up a call with Miles to learn more if you like.

Cristina

---

**From:** Miles Carroll (b) (6)  
**Sent:** Thursday, March 19, 2020 5:57 PM  
**To:** Cassetti, Cristina (NIH/NIAID) [E] (b) (6)>  
**Subject:** (b) (5) SARS-2 Pathology

Hi Cristina,

Obviously all unpublished but happy to talk Bernie through an overview of the model.

(b) (4)

Kind Regards

Miles

\*\*\*\*\*

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\*\*\*\*\*



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 30 Mar 2020 18:34:40 +0000  
**To:** Bok, Karin (NIH/VRC) [E]  
**Subject:** Re: Coronavirus roundtable 3PM

If you can be on the call I will keep working through the (b) (5)

Thanks,

BG

Sent from my iPhone

On Mar 30, 2020, at 2:24 PM, Bok, Karin (NIH/VRC) [E] (b) (6) wrote:

I was also invited to that CoV roundtable (NBL/RBL) call today at 3 PM by Paula Bryant.  
Just in case you want to skip or are busy

Karin.

Karin Bok, MS, PhD

Senior Advisor, Vaccine Development

Office of the Director, Vaccine Research Center

National Institute of Allergy and Infectious Diseases

National Institutes of Health

phone: (b) (6) mobile: (b) (6) | email (b) (6)

<https://www.niaid.nih.gov/about/vrc>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 23 Mar 2020 17:49:09 +0000  
**To:** Chen, Grace (NIH/NIAID) [E]  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E]  
**Subject:** Re: NP swabs

If you need them, please let Hilary know about your needs.

Barney

Sent from my iPhone

On Mar 23, 2020, at 1:40 PM, Chen, Grace (NIH/NIAID) [E] (b) (6) > wrote:

We have only used recently in the 2 cases we checked for COVID however, it may be good for us to have a supply in case needed.

---

**From:** "Graham, Barney (NIH/VRC) [E]" <(b) (6)>  
**Date:** Monday, March 23, 2020 at 1:34 PM  
**To:** Julie Ledgerwood <(b) (6)>, Grace Chen (b) (6) >  
**Subject:** Fwd: NP swabs

FYI. Do you have a need for nasal swabs?

Barney

Sent from my iPhone

Begin forwarded message:

**From:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6) >  
**Date:** March 23, 2020 at 1:20:39 PM EDT  
**To:** "Erbelding, Emily (NIH/NIAID) [E]" (b) (6) >, "Rotrosen, Daniel (NIH/NIAID) [E]" (b) (6) >, "Dieffenbach, Carl (NIH/NIAID) [E]" (b) (6) >, "Holland, Steven (NIH/NIAID) [E]" (b) (6) >  
"Lane, Cliff (NIH/NIAID) [E]" (b) (6) >, "Mascola, John (NIH/VRC) [E]" (b) (6) >

Cc: "Bushar, Nicholas (NIH/NIAID) [E]" (b) (6) >, "Cassetti, Cristina (NIH/NIAID) [E]" (b) (6), "Hackett, Charles (NIH/NIAID) [E]" (b) (6), "Togias, Alkis (NIH/NIAID) [E]" (b) (6) >, "Read, Sarah (NIH/NIAID) [E]" (b) (6) >, "Barron, Karyl (NIH/NIAID) [E]" (b) (6) >, "McNay, Laura (NIH/NIAID) [E]" (b) (6), "Graham, Barney (NIH/VRC) [E]" (b) (6) >, "Auchincloss, Hugh (NIH/NIAID) [E]" (b) (6), "Eisinger, Robert (NIH/NIAID) [E]" (b) (6), "Lerner, Andrea (NIH/NIAID) [E]" (b) (6) >

**Subject: NP swabs**

As we prepare to launch additional studies, NP swabs are going to be hard to come by via usual channels. I *think* we found a way to make a pooled ask for this, but we need estimates from each division for their immediate needs as well as needs for the next two months. Could you provide Nick Bushar with an estimate and related studies by **COB Wednesday 3/25?**

Many thanks.  
Hilary

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 24 Feb 2020 13:00:04 +0000  
**To:** Morabito, Kaitlyn (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: Barney, John tick-tock slide for Tony COVID-2019

I suspect this is for the Florence meeting.

I want to make a timeline slide as well, but with more detail. I think it would be hard to go faster than this. Maybe a day here and there.

Considering what is happening in Italy, it seems unlikely to happen.

Barney

---

**From:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)  
**Sent:** Monday, February 24, 2020 7:57 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)>; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>  
**Subject:** Re: Barney, John tick-tock slide for Tony COVID-2019

I can work on adding to this, if this is what we're looking for.

Do we have deadline for this?

---

**From:** Barney Graham <(b) (6)>  
**Date:** Sunday, February 23, 2020 at 7:06 PM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6)>, Kizzmekia Corbett (b) (6)>  
**Subject:** Fwd: Barney, John tick-tock slide for Tony COVID-2019

FYI. We need to work on this. We will all want to use it.

BG

Sent from my iPhone

Begin forwarded message:

**From:** "Graham, Barney (NIH/VRC) [E]" (b) (6)>  
**Date:** February 23, 2020 at 7:05:36 PM EST  
**To:** "Mascola, John (NIH/VRC) [E]" (b) (6)>

Cc: "Folkers, Greg (NIH/NIAID) [E]" (b) (6)>, "Ledgerwood, Julie (NIH/NIAID) [E]" (b) (6)

**Subject: Re: Barney, John tick-tock slide for Tony COVID-2019**

Hi Greg. We have the outline of a slide and have been thinking about how to show this. Will work with Kaitlyn. Notably, VRC did not do this one by ourselves. Many groups were involved which required a lot of coordination.

Barney

Sent from my iPhone

On Feb 23, 2020, at 5:29 PM, Mascola, John (NIH/VRC) [E] <(b) (6)> wrote:

Barney has been tracking this – so will let him respond. Julie also copied.  
Of note, DMID holding IND and will do phase 1 – so this is inter divisional NIAID.

Currently, I don't know of a slide – but we could ask our clinical group to make one – as we have before.

Best,  
John

---

**From:** Folkers, Greg (NIH/NIAID) [E] (b) (6)  
**Sent:** Sunday, February 23, 2020 5:18 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6); Mascola, John (NIH/VRC) [E] (b) (6)  
**Cc:** Folkers, Greg (NIH/NIAID) [E] (b) (6)  
**Subject:** Barney, John tick-tock slide for Tony COVID-2019

Barney, John

We want to make a timeline slide showing how fast we (you) have moved on COVID-2019

Do you have a timeline (text or slide) that I could use to flesh out/improve on what I have below

- 12-31-2019 WHO alerted of cluster of pneumonia cases in Wuhan, China
- 1-9-2020 WHO announces that outbreak in Wuhan caused by a novel coronavirus (now called SARS-CoV-2)
- 1-10-2020 Chinese release first genome of SARS-CoV-2
- 1-28-2020 VRC: Stabilized spike protein designed and samples produced

- 2-10-2020 VRC: 3D molecular structure of spike protein reconstructed; manuscript submitted to *Science*
- 2-17-2020 VRC: Manuscript accepted by *Science*
- 2-19-2020 VRC: Paper published online by *Science*
- 2-21-2020 VRC: IND for mRNA vaccine submitted

Thanks as ever for your help

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 18 Dec 2019 19:22:01 +0000  
**To:** Young, Monique (NIH/VRC) [E]  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E]  
**Subject:** Fwd: VRC-AbCellera (b)(4) collaboration and data discussion

Hi Monique. Could you work with Tina to figure this out.

Thanks,

BG

Sent from my iPhone

Begin forwarded message:

**From:** "Mascola, John (NIH/VRC) [E]" (b)(6)>  
**Date:** December 18, 2019 at 12:14:11 PM EST  
**To:** "Suhana, Tina (NIH/VRC) [E]" <(b)(6)>  
**Cc:** "Austin, Sarah (NIH/NIAID) [E]" (b)(6) "Graham, Barney (NIH/VRC) [E]" (b)(6)  
**Subject:** RE: VRC-AbCellera (b)(4) collaboration and data discussion

Thanks. But also, this is important enough that I would move some other meetings. Lets stay in touch with Banney and his office, we need both of us at the meeting.

Thanks,  
John

---

**From:** Suhana, Tina (NIH/VRC) [E] <(b)(6)>  
**Sent:** Wednesday, December 18, 2019 12:08 PM  
**To:** Mascola, John (NIH/VRC) [E] (b)(6)>  
**Cc:** Austin, Sarah (NIH/NIAID) [E] (b)(6)  
**Subject:** FW: VRC-AbCellera (b)(4) collaboration and data discussion

Hi John,

Your availability has been noted.

Thanks,  
Tina

**From:** Payal Sipahimalani <(b) (6)>  
**Sent:** Wednesday, December 18, 2019 11:35 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6); Carl Hansen (b) (6)>; Stein, Judy (NIH/VRC) [C] (b) (6)>; Ester Falconer (b) (6) Murray McCutcheon (b) (6)>; Kanekiyo, Masaru (NIH/VRC) [E] (b) (6)>; Emilie Lameignere (b) (6) Andrews, Sarah (NIH/VRC) [E] (b) (6)>; Kathryn Westendorf (b) (6)>; Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E] (b) (6)>; Gall, Jason (NIH/VRC) [C] (b) (6)>; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>  
**Cc:** Young, Monique (NIH/VRC) [E] (b) (6)>; Suhana, Tina (NIH/VRC) [E] (b) (6)>; Grier, Shardae (NIH/VRC) [E] (b) (6)>; Dlovan Mohammad (b) (6)  
**Subject:** Re: VRC-AbCellera (b) (4) collaboration and data discussion

Thank you Barney.

May I please ask you all, before the end of this week, to [provide your availability](#) for the call? It would be wonderful to get something in our calendars before we break for the holidays.

Thank you,  
Payal.

On Wed, Dec 18, 2019 at 12:50 AM Graham, Barney (NIH/VRC) [E] (b) (6)> wrote:  
Thanks Ester,

I've added two more people here, Jason Gall is head of VRC Strategic planning. Dr. Corbett leads our coronavirus work. We will look for times in January.

Best wishes,

Barney

Sent from my iPhone

> On Dec 17, 2019, at 11:55 PM, Ester Falconer (b) (6) wrote:

>

> Dear John, Barney and VRC (b) (4) team,

>

> John, it was a pleasure to speak with you at the AET conference in San Diego last week. We believe the VRC and AbCellera are (b) (4)

(b) (4)

(b) (4)

>

> I'm attaching a slide deck we presented at our last (b) (4) update meeting on December 5, as a starting point for our discussions. (b) (4)

(b) (4)

>

> Payal has offered to help co-ordinate a meeting time in the New Year on our end.

>

> And a note for Judy: Murray is looking at the (b) (4) you sent and will reach out very shortly with some questions and to set up a call.

>

> Thank you kindly,

>

> Ester

--

Payal Sipahimalani, MSc, PMP  
Project Manager  
AbCellera Biologics Inc.

2215 Yukon Street

Vancouver BC V5Y 0A1

T: (b) (6)

M: (b) (6)

[abcellera.com](http://abcellera.com)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 6 Mar 2020 18:23:33 +0000  
**To:** (b) (6)  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]; Morabito, Kaitlyn (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]  
**Subject:** RE: Question

Hi Rich,

We could send (b) (4) but have already sent it (or are about to send) to Dennis Burton. Could you just get it from him? We have a few (b) (4) Just getting started. It's likely that Dennis is also trying to make those and may beat us. We will see.

Dr. Corbett is the scientific lead on this project, and probably more reliable than me.

Best wishes,

Barney

-----Original Message-----

**From:** (b) (6) >  
**Sent:** Thursday, March 5, 2020 6:50 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Subject:** Question

Hi Barney

How are you? All your favorite pathogens making the news eh..

I am going to put in a (b) (4) ... like everyone else on the outside

You are the man with (b) (4). I take it?

Which are available that we could get? Happy for it to be a collaboration. (b) (4) might be helpful.

Possible?

Can do mta of course, have a few with John

Rich

Richard T Wyatt, PhD  
Professor  
Department of Immunology and Microbiology The Scripps Research Institute IMM28 La Jolla, CA 92037

(b) (6)

Office phone: (b) (6)  
Cell phone: (b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 18 Mar 2020 12:30:12 +0000  
**To:** Morabito, Kaitlyn (NIH/VRC) [E]; Alvarado, Gabriela (NIH/VRC) [C]; Corbett, Kizzmekia (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]; Ruckwardt, Tracy (NIH/VRC) [E]; Kanekiyo, Masaru (NIH/VRC) [E]  
**Subject:** Fwd: COVID-19 Planning

Kaitlyn and Gabby. Could you work on this list with input from Kizzy, Tracy, and Masaru?

Thanks,

Barney

Sent from my iPhone

Begin forwarded message:

**From:** "Bushar, Nicholas (NIH/NIAID) [E]" <(b) (6)>  
**Date:** March 18, 2020 at 7:59:45 AM EDT  
**To:** "Daucher, Marybeth (NIH/NIAID) [E]" <(b) (6)>  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" <(b) (6)>, "Graham, Barney (NIH/VRC) [E]" <(b) (6)>  
**Subject:** RE: COVID-19 Planning

Good morning Marybeth –

Just following up on this request. We are really looking to ensure that we avoid any research gaps at the VRC if NIH decides to implement temporary lab closures.

Thanks,  
Nick

---

**From:** Bushar, Nicholas (NIH/NIAID) [E]  
**Sent:** Monday, March 16, 2020 10:02 AM  
**To:** Daucher, Marybeth (NIH/NIAID) [E] <(b) (6)>  
**Cc:** Marston, Hilary (NIH/NIAID) [E] <(b) (6)>  
**Subject:** COVID-19 Planning

MaryBeth -

As you may know, Harvard Med School sent out an email saying they would close all labs and that you would need explicit exemption to keep working.

We do not know that NIH will do this as well, but should be prepared. At this juncture, it would be prudent to get a list of VRC labs/personnel that are critical to COVID-19 work. Basically, whomever would be needed to keep COVID-19 response moving.

Would you be able to able to help get this list together?

Thanks,  
Nick

**Nicholas Bushar, Ph.D.**

Chief, Policy, Planning and Reporting Section

Policy, Planning, and Evaluation (PP&E) Branch

Office of Strategic Planning, Initiative Development, and Analysis, NIAID

National Institutes of Health (NIH)

Phone: (b) (6)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 26 Mar 2020 16:48:03 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Cc:** Mascola, John (NIH/VRC) [E]; Carlton, Kevin (NIH/VRC) [E]; Doria-Rose, Nicole (NIH/NIAID) [E]  
**Subject:** Re: SARS-Cov-2 Neutralizing Abs from Linqi lab

Having the [REDACTED] (b) (5)  
[REDACTED] (b) (5).

Barney

Sent from my iPhone

On Mar 26, 2020, at 12:44 PM, Corbett, Kizzmekia (NIH/VRC) [E]  
[REDACTED] (b) (6) wrote:

Kaitlyn and I also have all of the interim analyses information.

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
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National Institutes of Health

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40 Convent Drive  
Bethesda MD 20892  
Laboratory: [REDACTED] (b) (6)  
Personal: [REDACTED] (b) (6)  
Fax: (301) 480-2771

---

**From:** "Mascola, John (NIH/VRC) [E]" [REDACTED] (b) (6)  
**Date:** Thursday, March 26, 2020 at 12:42 PM  
**To:** Kevin Carlton <[REDACTED] (b) (6)>, Kizzmekia Corbett <[REDACTED] (b) (6)>, Barney Graham <[REDACTED] (b) (6)>  
**Cc:** "Doria-Rose, Nicole (NIH/NIAID) [E]" [REDACTED] (b) (6)  
**Subject:** RE: SARS-Cov-2 Neutralizing Abs from Linqi lab

Hi Kevin, a couple of pieces here perhaps.

- Julie to work with John Beigel and the (b) (5) (b) (5) This will help guide need.
- Adrian to work out timeline for getting this assay up an running. This would also impact need for building 40 assay.

There may also be need for (b) (5) preclinically – so that may impact need.

Thanks,  
John

---

**From:** Carlton, Kevin (NIH/VRC) [E] (b) (6)>  
**Sent:** Thursday, March 26, 2020 12:39 PM  
**To:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** Doria-Rose, Nicole (NIH/NIAID) [E] <(b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6)>  
**Subject:** RE: SARS-Cov-2 Neutralizing Abs from Linqi lab

Thanks Kizzmekia/Barney.

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
**Sent:** Thursday, March 26, 2020 12:36 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** Doria-Rose, Nicole (NIH/NIAID) [E] (b) (6); Carlton, Kevin (NIH/VRC) [E] (b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6)>  
**Subject:** Re: SARS-Cov-2 Neutralizing Abs from Linqi lab

Thanks Dr. Graham,  
I agree. Transfer it all with no further optimization inside building 40 would be my preference.

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

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Fax: (b) (6)

---

**From:** Barney Graham (b) (6)  
**Date:** Thursday, March 26, 2020 at 12:34 PM  
**To:** Kizzmekia Corbett (b) (6) >  
**Cc:** "Doria-Rose, Nicole (NIH/NIAID) [E]" (b) (6) >, Kevin Carlton (b) (6), "Mascola, John (NIH/VRC) [E]" <(b) (6)>  
**Subject:** Re: SARS-Cov-2 Neutralizing Abs from Linqi lab

As I noted on an earlier email, (b) (5)  
(b) (5)

Barney

Sent from my iPhone

On Mar 26, 2020, at 12:18 PM, Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
wrote:

Thanks Nicole,  
The assay has been moved to VIP and with that Kevin will advise us further. I am not sure (b) (5)  
(b) (5) Perhaps Kevin can advise.

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
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---

**From:** "Doria-Rose, Nicole (NIH/NIAID) [E]" (b) (6)

**Date:** Thursday, March 26, 2020 at 10:26 AM

**To:** Kizzmekia Corbett (b) (6)>, Kevin Carlton (b) (6)

**Cc:** Barney Graham (b) (6)>, "Mascola, John (NIH/VRC) [E]"

(b) (6)

**Subject:** Re: SARS-Cov-2 Neutralizing Abs from Linqi lab

Just tell me what I need to do!

Thanks

Nicole

---

**From:** "Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6)

**Date:** Thursday, March 26, 2020 at 9:02 AM

**To:** "Carlton, Kevin (NIH/VRC) [E]" (b) (6)>, "Doria-rose, Nicole (NIH/NIAID) [C]" (b) (6)

**Cc:** "Graham, Barney (NIH/VRC) [E]" (b) (6)>, "Mascola, John (NIH/VRC) [E]"

(b) (6)

**Subject:** Re: SARS-Cov-2 Neutralizing Abs from Linqi lab

Okay. Thanks.

Have a good day.

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center

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Personal: (b) (6)

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---

**From:** Kevin Carlton (b) (6) >  
**Date:** Thursday, March 26, 2020 at 8:45 AM  
**To:** Kizzmekia Corbett (b) (6), "Doria-Rose, Nicole (NIH/NIAID) [E]" (b) (6) >  
**Cc:** Barney Graham (b) (6), "Mascola, John (NIH/VRC) [E]" (b) (6)  
**Subject:** RE: SARS-Cov-2 Neutralizing Abs from Linqi lab

Hi Kizzi,

I have not reached out to Nicole yet, so thank you for the email to Nicole. I am happy if the two of you work together to discuss the best way to accomplish the data review prior to sending to Emmes. I haven't heard if there was a decision made on the (b) (5) and depending on that answer we should include Adrian/Bob in the discussion.

Kevin

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Sent:** Wednesday, March 25, 2020 10:16 PM  
**To:** Doria-Rose, Nicole (NIH/NIAID) [E] (b) (6) >  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6) >; Mascola, John (NIH/VRC) [E] (b) (6) >; Carlton, Kevin (NIH/VRC) [E] (b) (6) >  
**Subject:** Re: SARS-Cov-2 Neutralizing Abs from Linqi lab

Thanks Nicole.

Also there has been (b) (5)  
(b) (5)

Just wanted to make you aware that I suggested you and if Kevin contacts you we should go through the prism analysis template together.

Thanks for all of your help, and mostly just being kind. *I need that right now.*

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
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---

**From:** "Doria-Rose, Nicole (NIH/NIAID) [E]" (b) (6) >

**Date:** Wednesday, March 25, 2020 at 9:23 PM

**To:** Kizzmekia Corbett (b) (6), "Driscoll, Jefferson (NIH/NIAID) [F]"

(b) (6) >, "Doria-Rose, Nicole (NIH/NIAID) [E]" (b) (6),

NIAID VRC HIMS Lab Meeting (b) (6)

**Cc:** Kaitlyn Morabito (b) (6), Barney Graham (b) (6)

"Zhou, Tongqing (NIH/VRC) [E]" (b) (6) >, "Holdsworth, Hongying (NIH/VRC) [C]"

(b) (6) >

**Subject:** Re: SARS-Cov-2 Neutralizing Abs from Linqi lab

Sure

Tina would you please add Kizzmekia to the webex for lab mtg next week ?

Thanks

Nicole

---

**From:** "Corbett, Kizzmekia (NIH/VRC) [E]" <(b) (6)>

**Date:** Wednesday, March 25, 2020 at 8:15:44 PM

**To:** "Driscoll, Jefferson (NIH/NIAID) [F]" <(b) (6)>, "Doria-Rose, Nicole (NIH/NIAID) [E]" (b) (6) >, "NIAID VRC HIMS Lab Meeting"

(b) (6)

**Cc:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6) >, "Graham, Barney (NIH/VRC) [E]"

(b) (6), "Zhou, Tongqing (NIH/VRC) [E]" (b) (6), "Holdsworth,

Hongying (NIH/VRC) [C]" (b) (6)

**Subject:** Re: SARS-Cov-2 Neutralizing Abs from Linqi lab

I read the paper, but can I please be added to the lab meeting discussion?

Sent from the mobile device of:

Kizzmekia S. Corbett, PhD

Senior Research Fellow

coVip Scientific Lead

VRC | NIAID | NIH

(b) (6)



---

**From:** "Driscoll, Jefferson (NIH/NIAID) [F]" (b) (6)>  
**Date:** Wednesday, March 25, 2020 at 4:46:18 PM  
**To:** "Doria-Rose, Nicole (NIH/NIAID) [E]" (b) (6), "NIAID VRC HIMS Lab Meeting" (b) (6)>  
**Cc:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6)>, "Graham, Barney (NIH/VRC) [E]" (b) (6)>, "Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6)>, "Zhou, Tongqing (NIH/VRC) [E]" (b) (6), "Holdsworth, Hongying (NIH/VRC) [C]" (b) (6)>  
**Subject:** Re: SARS-Cov-2 Neutralizing Abs from Linqi lab

Hi Nicole,

I would be happy to cover this paper next week.

Best,  
Jefferson

---

**From:** "Doria-Rose, Nicole (NIH/NIAID) [E]" <(b) (6)>  
**Date:** Wednesday, March 25, 2020 at 4:24 PM  
**To:** NIAID VRC HIMS Lab Meeting (b) (6)>  
**Cc:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6), "Graham, Barney (NIH/VRC) [E]" (b) (6)>, "Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6), "Zhou, Tongqing (NIH/VRC) [E]" (b) (6)>, "Holdsworth, Hongying (NIH/VRC) [C]" (b) (6)>  
**Subject:** FW: SARS-Cov-2 Neutralizing Abs from Linqi lab

Hi all

Check it out - Linqi Zhang's lab (where Hua got his PhD) isolated SARS-Cov-2 Neutralizing Abs from convalescent patients!

And our friend Qi is co-first author.

A few thoughts:

- I've never been so happy to be scooped
- but we aren't really scooped, because the more antibodies isolated by the field, the better
- this gives some confidence that we should be successful too.

Hi Mascola lab -

We will discuss this at lab meeting next week - Hua or Jefferson would you like to present it?

Thanks  
Nicole

---

**From:** "Wang, Hua (NIH/NIAID) [F]" (b) (6)  
**Date:** Wednesday, March 25, 2020 at 3:05 PM  
**To:** "Doria-rose, Nicole (NIH/NIAID) [C]" (b) (6)>, "Cale, Evan (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Mascola, John (NIH/VRC) [E]" (b) (6)>  
**Subject:** SARS-Cov-2 Neutralizing Abs from Linqi lab

Hi Nicole,

I just know a new pre-print paper of isolating SARS-Cov-2 Neutralizing Abs from Linqi lab.  
Hope this may help our team to work on the Neut assay of SARS-Cov-2 and related works.

<https://connect.biorxiv.org/relate/content/181>

Best,  
Hua

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 21 Apr 2020 17:36:42 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** Re: Can the (b) (4), (b) (5) Wait Until Next Week?

Yes. (b) (4), (b) (5).

BG

Sent from my iPhone

On Apr 21, 2020, at 12:24 PM, Corbett, Kizzmekia (NIH/VRC) [E]  
(b) (6) wrote:

(b) (4), (b) (5)

Is backordered. Can arrive next Wednesday and by next Friday will have an answer on the (b) (4), (b) (5)  
If not, I can get on the list serves.

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
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---

**From:** Monique Young (b) (6)  
**Date:** Tuesday, April 21, 2020 at 12:19 PM  
**To:** Kizzmekia Corbett (b) (6) >  
**Subject:** RE: Emergency Order (Again)

The order is placed and scheduled for delivery tomorrow.

Item (b) (4), (b) (6) is back ordered with availability in 7 business days. I will place that order Tue Apr 28<sup>th</sup>. If you do not wish to place that order or have another vendor, please let me know.

Please sign, date, and scan the packing slip to me for my credit card files and leave the original on my desk.

Thanks...Monique

---

**From:** Young, Monique (NIH/VRC) [E]  
**Sent:** Monday, April 20, 2020 7:00 PM  
**To:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Subject:** RE: Emergency Order (Again)

Roger that...will do.

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 6:44 PM  
**To:** Young, Monique (NIH/VRC) [E] (b) (6)  
**Subject:** Emergency Order (Again)

Good morning/night Monique,  
We need to place an emergency order of the following 3 products, preferably for delivery on Wednesday, April 22, 2020. Please order 2 vials of each.

<https://www.southernbiotech.com/>

<https://www.southernbiotech.com/>

<https://www.southernbiotech.com/>

(b) (4), (b) (5)

Same justification.

<Order\_Confirmation\_PU\_249759\_1\_1\_275019.pdf>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 7 Feb 2020 23:46:32 +0000  
**To:** Boyaka, Prosper  
**Subject:** Re: Invitation to The Ohio State University  
**Attachments:** Outlook-qmazkhxo.png

Hi Prosper. Thank you for this invitation. Unfortunately I have a prior obligation at that time. However, I'm glad you contacted me because I wondered if there were investigators at OSU who have [REDACTED] (b) (4)

Best wishes,

Barney

Sent from my iPhone

On Feb 7, 2020, at 4:01 PM, Boyaka, Prosper <[REDACTED] (b) (6)> wrote:

Dear Dr. Graham,

You certainly do not remember me. I was a postdoc at UAB with Jerry McGhee and I use to come to Vanderbilt for the meetings of the PPG grant led by Peter Wright.

I moved to OSU in 2006 and I am now the co-director of the Host Defense and Microbial Biology (HDMB) program at the Infection Disease Institute (IDI). One of the goal of the program is to facilitate interactions between investigators involved in vaccine research and advocate for vaccine research/development.

We wanted to take advantage of the unfortunate coronavirus outbreak to assess the current status of vaccine research at OSU and are planning a one day mini workshop where we would like to invite you as an external speaker. Your experience and perspective would be extremely valuable to our members and to the scientific community at OSU and I really hope that you will positively consider this invitation.

The leadership of the University requested the mini workshop to take place before May and thus, we it has been tentatively scheduled for April 15, 2020, with the option of move the even on April 16.

I am looking forward to hearing back from you and I apologize in advance for the limited options and the short notice.

Best regards,

Prosper

<Outlook-qmazkhxo.png>

**Prosper N. Boyaka, Ph.D.**

Professor of Immunology

Departments of Veterinary Biosciences, and Microbial Infection and Immunity

HDMB program co-director: OSU, Infection Diseases Institute

**The Ohio State University**

VMAB Room 354

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<https://idi.osu.edu/our-work/host-defense-and-microbial-biology>

<http://vet.osu.edu/ProsperBoyaka>

[http://scholar.google.com/citations?hl=en&user=NtaMxysAAAAJ&view\\_op=list\\_works](http://scholar.google.com/citations?hl=en&user=NtaMxysAAAAJ&view_op=list_works)



THE OHIO STATE UNIVERSITY



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 16 Mar 2020 22:51:05 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C]  
**Cc:** Routh, Jennifer (NIH/NIAID) [E]; Oplinger, Anne (NIH/NIAID) [E]  
**Subject:** Fwd: Canadian Broadcasting Corp. query re: COVID-19

FYI.

BG

Sent from my iPhone

Begin forwarded message:

**From:** ALLISON DEMPSTER <allison.dempster@cbc.ca>  
**Date:** March 16, 2020 at 6:14:19 PM EDT  
**To:** "Graham, Barney (NIH/VRC) [E]" (b) (6)  
**Subject:** Canadian Broadcasting Corp. query re: COVID-19

Hello Dr. Graham,

I'm a reporter with CBC's national radio program and podcast 'The Cost of Living'.

We are working on a story about the economics of developing a vaccine for COVID-19. I'm hoping to paint a picture of what it takes to find a vaccine and then manufacture it on a global scale.

I'd be very interested in hearing about what's underway at the Vaccine Research Centre and I thought you might be able to give us some insight on what the challenges are -- why it takes the time and money it does (and how that affects the economics of vaccine development).

Of course, I realize this must be an extraordinarily busy time for you! But if you have time for a taped audio interview, that would be wonderful. I expect it would take 15 minutes.

Any chance we could arrange something for tomorrow (Tues) or Wednesday morning? Let me know what's possible.

--

Thanks,

Allison Dempster  
Field Producer-Reporter

CBC National News  
Calgary, Alberta  
mobile: (b) (6)  
twitter: @dempsterCBC

**From:** (b) (6)  
**Sent:** Tue, 25 Feb 2020 13:46:57 -0500  
**To:** Coleen Cunningham  
**Cc:** Mascola, John (NIH/VRC) [E]  
**Subject:** Re: coronavirus vaccine

Hi Coleen,

We are working with Moderna on an mRNA vaccine that is an extension of our collaboration on MERS CoV over the last 3 years.

It will be in a phase 1 starting in a few weeks. So far, this is for 18-50 yo but children and elderly groups are obviously needed as we move to phase 2.

There are now all the usual suspects with platform vaccine approaches joining the vaccine landscape. People in DMID and at BARDA are trying to track this. There are several dozen that you can find in press releases including some from big pharma.

Best wishes,

Barney

Sent from my iPhone

On Feb 25, 2020, at 12:58 PM, Coleen Cunningham, M.D. (b) (6) wrote:

Barney and John,

There are a small group of pediatric people who are trying to put together information about Coronavirus and children. I've heard reports that children aren't getting sick but I find it hard to believe they are not becoming infected- kids are usually the vectors in respiratory illness?

I told folks that I would try to find out what's being done in vaccine. I am guessing that people are focused on adults but I believe there will be a need to vaccinate children as well so I hope someone is thinking about the kids!.

Since you two know more about vaccines than anyone I know, I was hoping you could provide me with any information about what VRC is working on and perhaps refer me to the right people who would be able to provide me with available information on other products in development.

Any help you could provide me would be greatly appreciated.

Coleen

Coleen K. Cunningham, M.D.  
Professor of Pediatrics, Pathology and Global Health  
Vice Chair for Research, Pediatrics  
Duke University School of Medicine  
DUMC 3522  
Durham, NC, 27710

(b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 15 Mar 2020 19:40:59 +0000  
**To:** Polack, Fernando P  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]; (b) (6); Sebastián Esperante; Jorge Geffner  
**Subject:** Re: Covid question

Hi Monique. Can you help find a time for a 30minute call?

BG

Sent from my iPhone

On Mar 15, 2020, at 1:11 PM, Polack, Fernando P <(b) (6)> wrote:

Thanks Barney! We would love to collaborate and get the (b) (4) and would love to chat during the week and share with you what we think is going on to get your input. May be we can schedule a VC? I am copying Damian and Sebas to provide all details (MTA, address, etc) re plasmids and get the ball rolling.

Best,

Fernando

Obtener [Outlook para iOS](#)

**De:** Graham, Barney (NIH/VRC) [E] (b) (6) >

**Enviado:** Sunday, March 15, 2020 11:46:34 AM

**Para:** Polack, Fernando P <(b) (6)>

**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >; Stein, Judy (NIH/VRC) [C]  
(b) (6)

**Asunto:** RE: Covid question

Hi Fernando,

Sorry to be so behind on answering. We have come to the point where we are only able to share

(b) (4).

If you want (b) (4)

(b) (4) let

us know.

Also Jim Crowe's lab at Vanderbilt has made some (b) (4) so may he can share.

Would like to hear more about your thoughts and findings when you have a chance.

Best wishes,

Barney

---

**From:** Polack, Fernando P [REDACTED] (b) (6)  
**Sent:** Thursday, March 12, 2020 1:55 PM  
**To:** Graham, Barney (NIH/VRC) [E] [REDACTED] (b) (6)>  
**Subject:** Covid question

Dear Barney,

Wonderful presentation today. Congratulations!!

We have some interesting (and potentially pretty important) observations in sera we would like to confirm and were wondering whether you have and could share with us a [REDACTED] (b) (4), [REDACTED] (b) (4). I imagine the lab must be terribly busy, but if at all possible it would be terrific.

Thanks!

Fernando

Obtener [Outlook para iOS](#)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 24 Jan 2020 14:22:41 +0000  
**To:** Morabito, Kaitlyn (NIH/VRC) [E]  
**Subject:** FW: samples...

You started an interesting thread.

BG

---

**From:** Embry, Alan (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, January 24, 2020 9:18 AM  
**To:** Stemmy, Erik (NIH/NIAID) [E] (b) (6); Graham, Barney (NIH/VRC) [E]  
(b) (6)  
**Cc:** Marston, Hilary (NIH/NIAID) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E]  
(b) (6); NIAID Coronavirus Response SWAT 2020  
(b) (6)  
**Subject:** RE: samples...

I'm guessing other avenues will be faster, but I also know the Dean of Research there very well if helpful.

Alan

---

**From:** Stemmy, Erik (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, January 24, 2020 9:06 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** Marston, Hilary (NIH/NIAID) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E]  
(b) (6); NIAID Coronavirus Response SWAT 2020  
(b) (6)  
**Subject:** Re: samples...

We have a CEIRS investigator at that institution that is already in touch with them.

Sent from my iPhone

On Jan 24, 2020, at 9:02 AM, Graham, Barney (NIH/VRC) [E] <(b) (6)> wrote:

I heard through my network that there is now a case at Duke/NUS Hospital in Singapore.

---

**From:** Hilary Marston (b) (6)  
**Date:** Thursday, January 23, 2020 at 5:58 PM  
**To:** Kizzmekia Corbett (b) (6); NIAID Coronavirus Response SWAT 2020

(b) (6)

**Subject:** RE: samples...

Re. Vincent, yes absolutely – just wanted folks to know when time zero was for (b) (5)

Re. (b) (5), Grace Chen and I are pushing with king county.

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >

**Sent:** Thursday, January 23, 2020 5:52 PM

**To:** Marston, Hilary (NIH/NIAID) [E] (b) (6) >; NIAID Coronavirus Response SWAT 2020

(b) (6)

**Subject:** Re: samples...

And, as for other potential (b) (5), is there any update there?

Sent from the mobile device of:

Kizzmekia S. Corbett, PhD

Senior Research Fellow

NIH | NIAID | VRC

(b) (6)

---

**From:** "Marston, Hilary (NIH/NIAID) [E]" <(b) (6)>

**Date:** Thursday, January 23, 2020 at 5:43:25 PM

**To:** "NIAID Coronavirus Response SWAT 2020" (b) (6) >

**Subject:** samples...

We really are trying hard here. On the USG Sample Sharing working group, CDC shared that they started trying to (b) (5)

(b) (6) to BEI and are taking steps to do that.

So, some delay due to the virus itself.

Hilary D. Marston, MD, MPH

Medical Officer and Policy Advisor for Global Health

Immediate Office of the Director

National Institute of Allergy and Infectious Diseases

Cell: (b) (6)

Email: (b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 25 Apr 2020 22:25:35 +0000  
**To:** Califano, Andrea  
**Cc:** Cynn, Esther;Eric Greene;Remole, Kelley E;Brown, Jessie A.;Marks, Andrew R.  
**Subject:** Re: Covid19 Virtual Symposium

After what you all have been through in New York I am glad to spend my time doing this with you.

Barney

Sent from my iPhone

On Apr 25, 2020, at 6:09 PM, Califano, Andrea (b) (6) > wrote:

Dear Barney

So great that you could participate. We can only imagine how busy you must be and really appreciate your availability.

Andrea

Andrea Califano  
Columbia University

----- Original message -----

From: "Cynn, Esther" (b) (6)

Date: 4/25/20 3:58 PM (GMT-05:00)

To: Eric Greene (b) (6), "Graham, Barney (NIH/VRC) [E]"  
(b) (6) >

Cc: "Remole, Kelley E" (b) (6), "Brown, Jessie A."

(b) (6) >, "Califano, Andrea" (b) (6), "Marks, Andrew R." <(b) (6)>

Subject: Re: Covid19 Virtual Symposium

Hello Dr. Graham,

We look forward to hearing your talk! We will schedule you in for June 3<sup>rd</sup>, and communicate with you again as we get closer to that date.

In the meantime, if you can fill out the [speaker info form](#), that would be great.

Thank you!

Best,  
Esther

---

**From:** Eric Greene (b) (6)

**Date:** Saturday, April 25, 2020 at 3:37 PM

**To:** "Graham, Barney (NIH/VRC) [E]" (b) (6)  
**Cc:** "Remole, Kelley E" <(b) (6)> "Brown, Jessie A."  
(b) (6) "Cynn, Esther" (b) (6) "Califano,  
Andrea" (b) (6), "Marks, Andrew R." (b) (6)>  
**Subject:** Re: Covid19 Virtual Symposium

Thanks Barney,

I have cc'ed Kelley Remole, Jessie Brown and Ester Cynn who can help get you scheduled for Wednesday June 3rd. We are all really looking forward to hearing about your science.

Thank you and take care,  
Eric

Prof. Eric C. Greene, Ph.D.  
Depart. of Biochemistry & Molecular Biophysics  
Columbia University  
New York, NY 10032  
(E) (b) (6)  
(E) (b) (6)  
(URL) [www.thegreenelab.com/#singlemolecule](http://www.thegreenelab.com/#singlemolecule)

On Apr 25, 2020, at 10:49 AM, Graham, Barney (NIH/VRC) [E] (b) (6)> wrote:

Thank you for your Invitation. I would be glad to do this. It might be a little more interesting if we waited till 1st of June because we hope to have some things published by then that would give me more freedom to talk about our data. Much of what we are doing at the moment is proprietary because of the work with Moderna. I could talk about prior coronavirus work and the structure and getting off to a fast start, but sharing data would be more interesting. Glad to do it either way. I'm available on the 13th.

Best wishes,

Barney

Sent from my iPhone

On Apr 25, 2020, at 6:48 AM, (b) (6)> wrote:

Hi Dr. Graham,

Did you have any chance to consider my earlier invitation? We would have space in the May 13th edition (or later if its better fro your schedule) of the symposium, by which time we will hav had over one hundred presenters in the series.

Thank you,  
Eric

Prof. Eric C. Greene, Ph.D.  
Depart. of Biochemistry & Molecular Biophysics  
Columbia University  
New York, NY 10032  
(E) [REDACTED] (b) (6)  
(E) [REDACTED] (b) (6)  
(URL) [www.thegreenelab.com/#singlemolecule](http://www.thegreenelab.com/#singlemolecule)

Begin forwarded message:

**From:** Eric Greene [REDACTED] (b) (6) >  
**Subject:** Covid19 Virtual Symposium  
**Date:** April 21, 2020 at 7:23:11 AM EDT  
**To:** [REDACTED] (b) (6)

Hi Dr. Graham,

Andrea Califano, Andy marks and I have been organizing a weekly Covid19 symposium at Columbia University every Wednesday from 8:30am to noon to help everyone keep abreast of rapid developments in research, diagnostics and clinical treatment. On behalf of all the organizers, I would like to extend an invitation to you to present a short seminar (20 min + 10 min questions). The presentations are given via Zoom and we typically have an audience of 500+ members of the Columbia Community. We have also been recording the presentations (only with the speaker's permission) and posting them to YouTube for a broader viewing audience. I have pasted URLs for information on the Symposium and the YouTube channel.

If you are interested and have the time, please let me know what Wednesday date you would prefer and please send me a title.

Thank you,  
Eric

Symposium Information: <https://zuckermaninstitute.columbia.edu/covid-19-virtual-symposium-series>



YouTube Channel: [https://www.youtube.com/playlist?list=PL\\_H\\_pQ44HPJ8vkJMGXfhSLdmzEsZ7OSro](https://www.youtube.com/playlist?list=PL_H_pQ44HPJ8vkJMGXfhSLdmzEsZ7OSro)

Prof. Eric C. Greene, Ph.D.  
Depart. of Biochemistry & Molecular Biophysics  
Columbia University  
New York, NY 10032  
(E) [REDACTED] (b) (6)  
(E) [REDACTED] (b) (6)  
(URL) [www.thegreenelab.com/#singlemolecule](http://www.thegreenelab.com/#singlemolecule)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 22:10:16 +0000  
**To:** William Dowling  
**Subject:** Tentative: WHO Consultation on SARS-CoV -2 Reagents, Cross reactivity and immune Assays - Wed 1 PM CET

Conflicts with disease enhancement meeting.

BG

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 24 Mar 2020 21:22:01 +0000  
**To:** (b) (6)  
**Subject:** Re: eTicket Itinerary and Receipt for Confirmation (b) (6)

I would agree. Might be some good deals coming up. Also I have enough (b) (6)

Sent from my iPhone

On Mar 24, 2020, at 5:13 PM, (b) (6) > wrote:

Ok... your (b) (6), but I think I should wait to (b) (6) may be moved or cancelled.

(b) (6) Senior Project Coordinator, Associate  
O (b) (6)

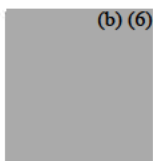


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**From:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Sent:** Tuesday, March 24, 2020 12:21 PM  
**To:** (b) (6)  
(b) (6)  
**Subject:** Fwd: eTicket Itinerary and Receipt for Confirmation (b) (6)

Looks like the reservation was finally confirmed.

(b) (6)

A large rectangular area of the email body is redacted, obscuring several lines of text.

Sent from my iPhone

Begin forwarded message:

**From:** "United Airlines, Inc." <[Receipts@united.com](mailto:Receipts@united.com)>  
**Date:** March 24, 2020 at 3:09:36 PM EDT  
**To:** "Graham, Barney (NIH/VRC) [E]" (b) (6) >  
**Subject:** eTicket Itinerary and Receipt for Confirmation (b) (6)



Tue, Mar 24, 2020

## Thank you for choosing United.

A receipt of your purchase is shown below. Please retain this email receipt for your records.

**Note:** There are travel restrictions in place due to the coronavirus. Check our [Important notices page](#) for the latest updates

Confirmation Number:

(b) (6)

(b) (6)



**Award Rules**

Additional charges may apply for changes in addition to any fare rules listed.

RWD/NONEND/-TRAN;VALID UA/LH;NOT VALID AFTER 3/24/2021

**MileagePlus Accrual Details**

Ineligible to accrue mileage or Premier qualifying credit.

**Baggage allowance and charges for this itinerary**

Origin and destination for checked baggage	1st bag charge	2nd bag charge	1st bag weight and dimensions	2nd bag weight and dimensions
Tue, Jul 21, 2020 Los Angeles, CA, US (LAX) to Salzburg, AT (SZG)	0 USD	100 USD	50lbs(23kg) - 62in(158cm)	50lbs(23kg) - 62in(158cm)
Mon, Jul 27, 2020	0 USD	100	50lbs(23kg) -	50lbs(23kg) -

Salzburg, AT (SZG) to Frankfurt, DE (FRA)		USD	62in(158cm)	62in(158cm)
Mon, Jul 27, 2020 Frankfurt, DE (FRA) to Washington, DC, US (IAD - Dulles)	0 USD	0 USD	70lbs(32kg) - 62in(157cm)	70lbs(32kg) - 62in(157cm)
Mon, Jul 27, 2020 Washington, DC, US (IAD - Dulles) to Los Angeles, CA, US (LAX)	0 USD	0 USD	70lbs(32kg) - 62in(157cm)	70lbs(32kg) - 62in(157cm)

In compliance with U.S. Department of Transportation regulations, checked baggage policies for your entire itinerary are determined by Deutsche Lufthansa AG. Visit [united.com/baggage](http://united.com/baggage) for more information.

### Important Information about MileagePlus Earning

- Accruals vary based on the terms and conditions of the traveler's frequent flyer program, the traveler's frequent flyer status and the itinerary selected. United MileagePlus® mileage accrual is subject to the rules of the MileagePlus program
- Once travel has started, accruals will no longer display. You can view your MileagePlus account for posted accrual
- You can earn up to 75,000 award miles per ticket. The 75,000 award miles cap may be applied to your posted flight activity in an order different than shown
- Accrual is only displayed for MileagePlus members who choose to accrue to their MileagePlus account.
- Our Premier Program changes January 1, 2020. If your itinerary includes travel with a scheduled departure in 2020, you may see our old Premier accrual metrics if 1) you booked prior to May 1, 2019 and are viewing an emailed receipt or 2) you booked prior to August 1, 2019 and are viewing a receipt online. The terms and conditions of Premier qualification can be found at [united.com/qualify](http://united.com/qualify).

### Data Protection Notice

Your personal data will be processed in accordance with the applicable carrier's privacy policy and if your booking is made via a reservation system provider ("GDS"), with its privacy policy. These are available at <http://www.iatatravelcenter.com/privacy> or from the carrier or GDS directly. You should read this documentation, which applies to your booking and specifies, for example, how your personal data is collected, stored, used, disclosed and transferred

### Hazardous materials

Federal law forbids the carriage of hazardous materials on board aircraft in your luggage or on your person. A violation can result in five years' imprisonment and penalties of \$250,000 or more (49 U.S.C. 5124). Hazardous materials include explosives, compressed gases, flammable liquids and solids, oxidizers, poisons, corrosives and radioactive materials. Common examples of hazardous materials/dangerous goods include spare or loose lithium batteries, fireworks, strike-anywhere matches, aerosols, pesticides, bleach and corrosive materials. Additional information can be found on:

- [united.com restricted items page](#)
- [FAA website Pack Safe page](#)
- [TSA website Prohibited Items page](#)

### Refunds Within 24 Hours



When you book and ticket a reservation through united.com, the United mobile app, the United Customer Contact Center, at our ticket counters or city ticket offices, or if you use MileagePlus® miles to book an award ticket, we will allow you to cancel the ticketed reservation without penalty and receive a 100 percent refund of the ticket price to the original form of payment if you cancel the reservation within 24 hours of purchase and if the reservation is made one week or more prior to scheduled flight departure.

### **Disinsection Notice**

Certain countries require that the passenger cabins of aircraft be treated with insecticides. For additional information and a list of those countries, please visit the [U.S. Department of Transportation's disinsection website](#).

### **IMPORTANT CONSUMER NOTICES**

**Tickets** - For tickets issued March 3 through March 31, 2020, customers will be permitted to change free of charge to a flight of equal or lesser value up to 12 months from the original ticket issue date. If the new flight is priced higher, customer may change for no fee but must pay the fare difference. If the new flight is priced lower, the customer may change for free but no residual value will be given. If the customer decides to cancel their flight, they can retain the value of the ticket to be applied to a new ticket without fee for travel up to 12 months from the original ticket issue date.

**Cancellations:** If the customer decides to cancel the flight they booked between March 3 and March 31, 2020, they can retain the value of the ticket to be applied to a new ticket without fee for travel up to 12 months from the original ticket issue date.

**Fare Validity:** This applies to all tickets, all fare types, all destinations, all points-of-sale, all travel dates available for sale, provided ticket is issued on 016-stock.

**Minimum Stay:** No minimum stay.

**Blackout Dates:** No blackout dates.

**Miscellaneous:** Fares, fees, rules and offers are subject to change without notice. Seats are capacity-controlled and may not be available on all flights or days. Fares are nonrefundable except during the first 24 hours after purchase. Other restrictions may apply.

**Notice of Baggage Liability Limitations** - For domestic travel between points within the United States (except for domestic portions of international journeys), United's liability for loss of, damage to, or delay in delivery of a customer's checked baggage is limited to \$3,500 per ticketed customer unless a higher value is declared in advance and additional charges are paid (not applicable to wheelchairs or other assistive devices). For such travel, United assumes no liability for high value, fragile, perishable, or otherwise excluded items; excess valuation may not be declared on certain types of valuable articles. Further information may be obtained from the carrier. For international travel governed by the Warsaw Convention (including the domestic portions of the trip), maximum liability is approximately 640 USD per bag for checked baggage, and 400 USD per passenger for unchecked baggage. For international travel governed by the Montreal Convention (including the domestic portions of the trip), maximum liability is 1,288 SDRs per passenger for baggage, whether checked or unchecked. For baggage lost, delayed, or damaged in connection with domestic travel, United requires that customers provide preliminary notice within 24 hours after arrival of the flight on which the baggage was or was to be transported and submit a written claim within 45 days of the flight. For baggage damaged or delayed in connection with most international travel (including domestic portions of international journeys), the Montreal Convention and United require customers to provide carriers written notice as follows: (a) for damaged baggage, within seven days from the date of receipt of the

damaged baggage; (b) for delayed baggage, within 21 days from the date the baggage should have been returned to the customer. Please refer to Rule 28 of United's Contract of Carriage for important information relating to baggage and other limitations of liability.

**Notice of Incorporated Terms** - Transportation is subject to the terms and conditions of United's Contract of Carriage, which are incorporated herein by reference. Incorporated terms may include, but are not limited to: 1. Limits on liability for personal injury or death of the customer, and for loss, damage, or delay of goods and baggage, including high value, fragile, perishable, or otherwise excluded items. 2. Claims restrictions, including time periods within which customers must file a claim or bring an action against the carrier. 3. Rights of the carrier to change terms of the contract. 4. Rules about reconfirmation of reservations, check-in times, and refusal to carry. 5. Rights of the carrier and limits on liability for delay or failure to perform service, including schedule changes, substitution of an alternate air carrier or aircraft, and rerouting. The full text of United's Contract of Carriage is available at [united.com](http://united.com) or you may request a copy at any United ticket counter. Passengers have the right, upon request at any location where United's tickets are sold within the United States, to receive free of charge by mail or other delivery service the full text of United's Contract of Carriage.

**Notice of Certain Terms** - If you have purchased a restricted ticket, depending on the rules applicable to the fare paid, one or more restrictions including, but not limited to, the following may apply to your travel: (1) the ticket may not be refundable but can be exchanged for a fee for another restricted fare ticket meeting all the rules/restrictions of the original ticket (including the payment of any difference in fares); (2) a fee may apply for changing/canceling reservations; or (3) select tickets may not be eligible for refunds or changes even for a fee; (4) select tickets have no residual value and cannot be applied towards the purchase of future travel; or (5) travel may be restricted to specific flights and/ or times and a minimum and/or maximum stay may be required. United reserves the right to refuse carriage to any person who has acquired a ticket in violation of any United tariffs, rules, or regulations, or in violation of any applicable national, federal, state, or local law, order, regulation, or ordinance. Notwithstanding the foregoing, you are entitled to a full refund if you cancel a ticket purchased at least a week prior to departure within 24 hours of purchase.

**Notice of Boarding Times** - For Domestic flights, customers must be at the boarding gate at least 15 minutes prior to scheduled departure. For International flights, customers must be at the boarding gate at least 30 minutes prior to scheduled departure. The time limits provided by United in this Notice are minimum time requirements. Customer and baggage processing times may differ from airport to airport. Please visit [united.com](http://united.com) for information regarding airport-specific boarding times. It is the customer's responsibility to arrive at the airport with enough time to complete check-in, baggage, and security screening processes within these minimum time limits. Please be sure to check flight information monitors for the correct boarding gate and the departure time of your flight. Failure to be at the boarding gate by the required time could result in the loss of your seat without compensation, regardless of whether you are already checked in or have a confirmed seat and boarding pass.

## **ADVICE TO INTERNATIONAL PASSENGERS ON LIMITATIONS OF LIABILITY -**

Passengers embarking upon a journey involving an ultimate destination or a stop in a country other than the country of departure are advised that the provisions of an international treaty (the Warsaw Convention, the 1999 Montreal Convention, or other



treaty), as well as a carrier's own contract of carriage or tariff provisions, may be applicable to their entire journey, including any portion entirely within the countries of departure and destination. The applicable treaty governs and may limit the liability of carriers to passengers for death or personal injury, destruction or loss of, or damage to, baggage, and for delay of passengers and baggage

Additional protection can usually be obtained by purchasing insurance from a private company. Such insurance is not affected by any limitation of the carrier's liability under an international treaty. For further information please consult your airline or insurance company representative.

**Notice - Overbooking of Flights** - Airline flights may be overbooked, and there is a slight chance that a seat will not be available on a flight for which a person has a confirmed reservation. If the flight is overbooked, no one will be denied a seat until airline personnel first ask for volunteers willing to give up their reservation in exchange for compensation of the airline's choosing. If there are not enough volunteers, the airline will deny boarding to other persons in accordance with its particular boarding priority. With few exceptions, including failure to comply with the carrier's check-in deadlines, which are available upon request from the air carrier, persons, denied boarding involuntarily are entitled to compensation. The complete rules for the payment of compensation and each airline's boarding priorities are available at all airport ticket counters and boarding locations. *Some airlines do not apply these consumer protections to travel from some foreign countries, although other consumer protections may be available. Check with your airline or your travel agent.*



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#### **E-mail Information**

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[View our Legal Notices](#)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 14 Mar 2020 12:08:43 +0000  
**To:** Prince, Tasheema (NIH/VRC) [C]; Ledgerwood, Julie (NIH/NIAID) [E]; Mascola, John (NIH/VRC) [E]; Daucher, Marybeth (NIH/NIAID) [E]; Koup, Richard (NIH/VRC) [E]  
**Cc:** Harris, Christina (NIH/NIAID) [E]; Hirsch, Marie (NIH/VRC) [E]; Daucher, Marybeth (NIH/NIAID) [E]  
**Subject:** RE: NIAID Preparedness update

This looks good to me.

BG

---

**From:** Prince, Tasheema (NIH/VRC) [C] (b) (6)  
**Sent:** Friday, March 13, 2020 4:56 PM  
**To:** Ledgerwood, Julie (NIH/NIAID) [E] <(b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6); Daucher, Marybeth (NIH/NIAID) [E] (b) (6)>; Koup, Richard (NIH/VRC) [E] <(b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** Harris, Christina (NIH/NIAID) [E] (b) (6)>; Hirsch, Marie (NIH/VRC) [E] (b) (6)>; Daucher, Marybeth (NIH/NIAID) [E] <(b) (6)>  
**Subject:** RE: NIAID Preparedness update

All edits compiled here. Ready to send if there are no other comments.

---

We are relaying some requests and recommendations from NIAID Leadership related to the evolving COVID-19 outbreak. We will keep you updated as we learn more.

Most important: If you are sick (even if you do not believe it could be COVID-19) please stay home and avoid exposing your colleagues. To this point, supervisors are asked to send people home who are symptomatic (even if it is not COVID-19). Supervisors are required to call OMS if a staff member is a confirmed COVID-19 case.

Official NIH Travel: You have probably seen the notification that NIH has asked all staff to avoid *official* travel. "Mission-critical" NIH official travel with strong justification could possibly be approved – on a case-by-case basis.

- Any staff (contracted staff or FTE) who believes they have been exposed to COVID-19 (personal or work-related travel, or other local exposures) should contact **OMS (info below)** for phone screening and advisement before returning to work.
- Supervisors are asked to encourage and even survey staff about their travel in the last 14 days, especially if travel was to a level 2 or 3 area. The purpose of this is to prevent possible transmission to other staff. OMS is available to discuss any potential exposures.



Telework: All staff who are eligible to telework should have training and approvals completed (FTEs and contract employees).

- Staff with children affected by school closures may be approved for telework if they self-report work and non-work activities.
- If NIH becomes “telework only” there are likely to be VPN connection issues. Currently only 200-300 staff in NIAID will have this access. The VRC needs a prioritized list of staff who need VPN access, which can include contractors. For scientific staff, this should start with mission-critical research programs (CoV, Malaria, Flu), clinical programs, regulatory and product development, vivarium support, finance support, etc.
- Supervisors should ensure that all mission-critical staff have what they need (e.g., laptops) to work. Sharing laptops or transferring laptops from non-mission critical to mission critical staff may be required.
- NIAID IT is working on the possibility of mission-critical staff using personal computers – this is TBD.
- Even if NIH becomes “telework only,” some mission-critical staff may be called back to work on a case-by-case basis.

NIAID will have updates on preparedness plans as they learn more from NIH and OPM.

**Occupational Medical Service (OMS)**

Operating Hours:

Monday–Friday

7:30 a.m. – 5 p.m.

Contact Information:

Email: [OMSMonitoringProgram@mail.nih.gov](mailto:OMSMonitoringProgram@mail.nih.gov)

Phone: 301-496-4411

---

**From:** Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)>  
**Sent:** Friday, March 13, 2020 3:43 PM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6)>; Daucher, Marybeth (NIH/NIAID) [E] (b) (6)>; Koup, Richard (NIH/VRC) [E] (b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** Harris, Christina (NIH/NIAID) [E] (b) (6)>; Hirsch, Marie (NIH/VRC) [E] (b) (6)>; Prince, Tasheema (NIH/VRC) [C] <(b) (6)>  
**Subject:** RE: NIAID Preparedness update

*A few suggested edits...*

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- The VRC should ensure that all mission critical staff have what they need (e.g., laptops) to work. This may mean sharing laptops or transferring laptops from non-mission critical to mission critical staff.
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- Even if NIH becomes "telework only" It is possible that some mission-critical staff would be called back to work on a case-by-case basis.

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Operating Hours:

Monday–Friday

7:30 a.m. – 5 p.m.

Contact Information:

Email: [OMSMonitoringProgram@mail.nih.gov](mailto:OMSMonitoringProgram@mail.nih.gov)

Phone: 301-496-4411

---

**From:** Mascola, John (NIH/VRC) [E] (b) (6)>

**Sent:** Friday, March 13, 2020 3:11 PM

**To:** Daucher, Marybeth (NIH/NIAID) [E] (b) (6)>; Koup, Richard (NIH/VRC) [E]

(b) (6) Graham, Barney (NIH/VRC) [E] (b) (6)>; Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)

**Cc:** Harris, Christina (NIH/NIAID) [E] (b) (6); Hirsch, Marie (NIH/VRC) [E]



(b) (6)>; Prince, Tasheema (NIH/VRC) [C] (b) (6)  
**Subject:** RE: NIAID Preparedness update

I was meeting with Tasheema and took the opportunity to make some edits.  
I can explain to the group some strong stylistic preferences that Rick, Barney, Julie and I generally adhere to – that I want to have reflected in all staff emails.

Thanks,

John

---

**From:** Daucher, Marybeth (NIH/NIAID) [E] <(b) (6)>  
**Sent:** Friday, March 13, 2020 1:25 PM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6)>; Koup, Richard (NIH/VRC) [E] (b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)>; Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)>  
**Cc:** Harris, Christina (NIH/NIAID) [E] <(b) (6)>; Hirsch, Marie (NIH/VRC) [E] (b) (6)  
**Subject:** RE: NIAID Preparedness update

No comments received – so I'll send this out this afternoon with additional emails Pls can forward to staff.  
Best,  
MB

---

**From:** Daucher, Marybeth (NIH/NIAID) [E]  
**Sent:** Thursday, March 12, 2020 4:18 PM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6)>; Koup, Richard (NIH/VRC) [E] (b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)>; Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)>  
**Cc:** Harris, Christina (NIH/NIAID) [E] (b) (6)>; Hirsch, Marie (NIH/VRC) [E] (b) (6)  
**Subject:** NIAID Preparedness update

Dear All,

Below is an email Christy and I would like to send to VRC senior leadership about COVID-19 outbreak preparation. Please let me know if you have any questions or concerns before we post it.

Thanks  
MB

---

NIAID is recommending the following actions as we deal with the evolving COVID-19 outbreak. We will keep you updated as we learn more.

- Travel

- There will be no non-essential work-related travel. Mission-critical travel must have a strong justification and will be approved on a case-by-case basis.
- Personal travel is not being restricted, however staff returning from U.S. states with 100+ COVID-19 cases will have to check in with OMS.
- Any staff who believe they have been exposed to COVID-19 (due to personal or official travel) should report to OMS (Inside NIAID has a link to OMS)
- Supervisors are asked to send people home who are symptomatic (even if it is not COVID-19) or ask staff who are sick to stay home. Supervisors are required to call OMS if a staff member is confirmed COVID-19 case.
- Supervisors should survey staff about their travel in the last 14 days especially if travel was to a level 3 or 2 area. The purpose of this is to avoid unnecessary transmission to other staff.

- Telework

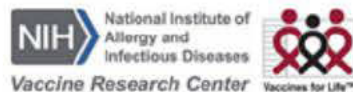
- All staff who are eligible to telework should have training and approvals completed (FTEs and contract employees).
- Staff with children affected by school closures may be granted telework privileges as long as they self-report work and non-work activities.
- IF NIH becomes “telework only” there are likely to be VPN connection issues. Currently only 200-300 staff in NIAID will have this access. **The VRC needs a prioritized list of staff who need VPN access, which can include contractors.** For scientific staff, this should start with mission-critical research programs (CoV, Malaria, Flu), clinical programs, product development, vivarium support, finance support, etc.
- The VRC should ensure that all mission critical staff have what they need (e.g., laptops) to work. This may mean sharing laptops or transferring laptops from non-mission critical to mission critical staff.
- NIAID IT is working on the possibility of mission-critical staff using personal computers – this is TBD.
- It is possible that some mission-critical staff called back to work on a case-by-case basis.

NIAID OBRS will have updates on preparedness plans as they learn more from NIH and OPM.

**Marybeth Daucher, Ph.D.**

Associate Director for Management and Operations  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive Room 1120  
Bethesda, MD 20892

office: (b) (6)  
mobile: (b) (6)  
(b) (6)



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The National Institute of Allergy and Infectious Diseases shall not accept liability for any statements made that are the sender's own and not expressly made on behalf of NIAID by one of its representatives.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 5 Apr 2020 20:55:05 +0000  
**To:** Mark H. Wener  
**Cc:** Stein, Judy (NIH/VRC) [C]; Thornburg, Natalie (CDC/DDID/NCIRD/DVD) (b) (6); (b) (6); Johnson, Jeff (CDC/DDID/NCHHSTP/DHPSE); Chihiro Morishima; Anu Chaudhary; Corbett, Kizzmekia (NIH/VRC) [E]; Morabito, Kaitlyn (NIH/VRC) [E]; Alvarado, Gabriela (NIH/VRC) [C]; Bok, Karin (NIH/VRC) [E]; Andrews, Charla (NIH/NIAID) [C]  
**Subject:** Re: NIH (b) (4)

That should be fine. The intent is that you should not use the reagents to develop something to sell for profit.

Barney

Sent from my iPhone

On Apr 5, 2020, at 2:08 PM, Mark H. Wener <(b) (6)> wrote:

Hi,

I submitted the signed MTA to UW tech transfer (Co-Motion) for UW approval. As you indicated earlier, I think it will be approved quickly.

I have a question about the wording in sections 3 of the MTA.

CURRENT:

(b) (4)

Thank you again,  
 Mark  
 Mark Wener, MD  
 Professor  
 Department of Laboratory Medicine  
 Adjunct, Department of Medicine  
 University of Washington  
 Seattle, WA 98195  
 phone (b) (6)

**From:** Stein, Judy (NIH/VRC) [C] (b) (6)

**Sent:** Sunday, April 5, 2020 7:26 AM

**To:** Thornburg, Natalie (CDC/DDID/NCIRD/DVD) (b) (6); Mark H. Wener (b) (6)

**Cc:** Johnson, Jeff (CDC/DDID/NCHHSTP/DHPSE) (b) (6); Chihiro Morishima (b) (6)

Anu Chaudhary (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6); Corbett,

Kizzmekia (NIH/VRC) [E] (b) (6); Morabito, Kaitlyn (NIH/VRC) [E]

(b) (6); Alvarado, Gabriela (NIH/VRC) [C] (b) (6); Bok, Karin

(NIH/VRC) [E] (b) (6); Andrews, Charla (NIH/NIAID) [C] (b) (6)

**Subject:** RE: NIH (b) (4)

Dear Dr. Wener,

I have attached a standard NIAID Simple Letter Agreement (SLA) for the transfer of the (b) (4)

Can you please ask your tech transfer office to sign and email back to me. UW has signed the same SLA for other transfers, so I don't think they will have questions, but they can feel free to contact me if they do.

Thanks very much.

Judy

Judy Stein, MBA, MSPH [C]  
 Strategic Planning and Development  
 Vaccine Research Center, NIAID, NIH  
 Tel: (b) (6)

---

**From:** Thornburg, Natalie (CDC/DDID/NCIRD/DVD) (b) (6)>

**Sent:** Sunday, April 5, 2020 10:06 AM

**To:** Mark H. Wener (b) (6)

**Cc:** Johnson, Jeff (CDC/DDID/NCHHSTP/DHPSE) (b) (6); Chihiro Morishima (b) (6);

Anu Chaudhary (b) (6); Stein, Judy (NIH/VRC) [C] (b) (6)>; Graham, Barney

(NIH/VRC) [E] (b) (6)>; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>  
**Subject:** NIH (b) (4)

Judy,

Dr. Werner's lab at UW has expressed interest in trying your (b) (4)  
(b) (4)  
(b) (4) once NIH gives the  
ok.

Thanks for your continued support,

Natalie

**Natalie J. Thornburg, Ph.D.**

Respiratory virus immunology team lead

Division of Viral Diseases

National Center for Immunization and Respiratory Diseases

**Centers for Disease Control and Prevention (CDC)**

1600 Clifton Road, NE, Mailstop G-18, Atlanta, GA 30329

(b) (6) Office | (b) (6) Work Cell | (b) (6)



**From:** (b) (6)  
**Sent:** Thu, 19 Mar 2020 04:01:58 -0400  
**To:** (b) (4)  
**Cc:** Mascola, John (NIH/VRC) [E]; Seder, Robert (NIH/VRC) [E]; Chopra, Nandita (NIH/NIAID) [E]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** Re: Long term plan to address (b) (4) and COVID

Hi (b) (4)

We have (b) (4)  
(b) (4)

I think we will have (b) (4)  
(b) (4)

Dr. Corbett will send the next protocols and we will discuss ways to accelerate.

Barney

Sent from my iPhone

On Mar 19, 2020, at 12:10 AM, (b) (4) <(b) (6), (b) (4)> wrote:

Dear Barney,  
am fully aligned on same. Meanwhile I was thinking of getting your (b) (4)

I just wanted to know what (b) (4)  
(b) (4)

3) If possible (b) (4)

4) (b) (4)

5) anything you can suggest for fast track for such activities will try my best  
I know am try to push too much and you are too busy given demand for everything but just  
thought of running several parallel activities to see how to support all initiatives to address  
present situation

Regards

(b) (4)

Please pardon me for any auto-correct spelling errors , may leading incorrect interpretation. Feel free to send me email to get clarity.

Sent from iPhone

On 18-Mar-2020, at 11:40 PM, Graham, Barney (NIH/VRC) [E] (b) (6). wrote:

Hi (b) (4). I really like the (b) (4)  
(b) (4) We could potentially (b) (4)  
(b) (4). We will  
continue to discuss.

Barney

---

**From:** (b) (4) <(b) (6), (b) (4)>  
**Sent:** Wednesday, March 18, 2020 12:37 PM  
**To:** Seder, Robert (NIH/VRC) [E] (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** Chopra, Nandita (NIH/NIAID) [E] (b) (6)>  
**Subject:** Fwd: Long term plan to address (b) (4) and COVID

Dear Bob and Barney,  
May be both of you can discuss following approach if you find it interesting - let me know. Just for clarity I mean to say (b) (4)  
(b) (4)

Regards  
(b) (4)

Please pardon me for any auto-correct spelling errors , may leading incorrect interpretation. Feel free to send me email to get clarity.

Sent from iPhone

Begin forwarded message:

**From:** (b) (4) <(b) (6), (b) (4)>  
**Date:** 18 March 2020 at 8:57:18 PM IST  
**To:** "Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6)>  
**Cc:** "Graham, Barney (NIH/VRC) [E]" (b) (6), (b) (4)  
(b) (6), (b) (4)>, "Gall, Jason (NIH/VRC) [C]" (b) (6), "Mascola, John (NIH/VRC) [E]" (b) (6) Simon Draper (b) (6), "Chopra, Nandita (NIH/NIAID) [E]" (b) (6), "Alvarado, Gabriela (NIH/VRC) [C]"

(b) (6) (b) (4) (b) (6), (b) (4) > (b) (4)  
(b) (6), (b) (4) >

**Subject: Re: Long term plan to address (b) (4) and COVID**

Dear All,

On another note we feel that may be (b) (4)  
(b) (4)

Is it possible for you to (b) (4)  
(b) (4)

Ps let me us know - (b) (4)  
(b) (4)

Let me know if (b) (4)

Regards

(b) (4)

Please pardon me for any auto-correct spelling errors , may leading incorrect interpretation. Feel free to send me email to get clarity.

Sent from iPhone

On 18-Mar-2020, at 8:44 PM, (b) (4) (b) (6), (b) (4) > wrote:

Dear Corbett and Jason,

Thanks for your emails

1) you will have to (b) (4)

(b) (4) (b) (4) I think (b) (4)  
(b) (4)

(b) (4)

2) (b) (4)

(b) (4)

3) mean while (b) (4)

(b) (4)

4) she will also (b) (4)

(b) (4).

5) (b) (4)

(b) (4)

6) mean while we will (b) (4)

7) either you are we (b) (4)

(b) (4)

(b) (4)

8)we can do (b) (4)

(b) (4)

9)am meeting tomorrow with (b) (4)

(b) (4)

Hope this gives clarity to all from complete plan.ps feel free to write me if anything needed

Regards

(b) (4)

Please pardon me for any auto-correct spelling errors , may leading incorrect interpretation. Feel free to send me email to get clarity.

Sent from iPhone

On 18-Mar-2020, at 8:18 PM, Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)> wrote:

I agree with sharing the sequences.

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center

National Institutes of Allergy and Infectious Diseases

National Institutes of Health

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892

Laboratory: (b) (6)

Personal: (b) (6)

Fax: (301) 480-2771

---

**From:** Barney Graham (b) (6)>

**Date:** Wednesday, March 18, 2020 at 9:50 AM

**To:** (b) (4) (b) (6), (b) (4)>

**Cc:** (b) (4) (b) (6), (b) (4)>, "Gall, Jason (NIH/VRC) [C]"

(b) (6)>, (b) (4) (b) (6), (b) (4)>, "Mascola, John (NIH/VRC) [E]" (b) (6)>, (b) (4) (b) (6), (b) (4)>,

"Chopra, Nandita (NIH/NIAID) [E]" (b) (6)>, (b) (4)

(b) (6), (b) (4)>, Kizzmekia Corbett (b) (6), "Alvarado,

Gabriela (NIH/VRC) [C]" <(b) (6)> (b) (4) (b) (6), (b) (4)>, Vien

(b) (4) (b) (6), (b) (4)>

**Subject:** RE: Long term plan to address (b) (4) and COVID

Hi Sumi,

Sharing the sequences that you use for (b) (4) would be very helpful. We will discuss internally how to proceed.

Best wishes,

Barney

---

**From:** (b) (4) (b) (6), (b) (4) >  
**Sent:** Wednesday, March 18, 2020 9:04 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Cc:** (b) (4) (b) (6), (b) (4) >; Gall, Jason (NIH/VRC) [C] (b) (6) >; Michael Piontek (b) (6), (b) (4) >; (b) (4) (b) (6), (b) (4) >; Chopra, Nandita (NIH/NIAID) [E] (b) (6); (b) (4) (b) (4) < (b) (6), (b) (4) >; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >; Alvarado, Gabriela (NIH/VRC) [C] (b) (6) >; (b) (4) (b) (6), (b) (4) >; (b) (4) (b) (6), (b) (4) >  
**Subject:** Re: Long term plan to address (b) (4) and COVID

Dear (b) (4)

Thank you for the introduction. Let's try our best to beat this virus.

Dear Jason, Barney and others,

Nice to e meet you and reconnet.

We have well characterised (b) (4) (b) (4). Also happy to jump on a call to discuss further.

Let me know how you would like to finalise (b) (4) (b) (4)?

Best wishes

(b) (4)

On Wed, 18 Mar 2020 at 12:33, Graham, Barney (NIH/VRC) [E] (b) (6) > wrote:

Thanks (b) (4)

Please keep Dr. Kizzmekia Corbett on any emails related to the coronavirus project. Also, add Gabriela Alvarado for project management.

Barney

Sent from my iPhone

On Mar 18, 2020, at 6:03 AM, (b) (4) (b) (6), (b) (4) > wrote:

Dear Jason and Barney,

I just talked with (b) (4).

Good news is she already has a (b) (4). She can ship it to you immediately. She will also help you for sharing appropriate protocol for (b) (4). You can interact with her directly to make sure that (b) (4) (b) (4).

She has previously interacted with you and knows you very well.

All of you can finalize sequence and then you can try the (b) (4).  
This would be the best way forward.

(b) (4)

Dear (b) (4)

Please do not send any (b) (4) to NIH/NIAID. Also, let Jason, Barney and Sumi finalize (b) (4).

Regards,

(b) (4), (b) (6)

---

**From:** (b) (4) [mailto:(b) (6), (b) (4)]

**Sent:** 18 March 2020 13:49

**To:** (b) (4)

**Cc:** 'Gall Jason (NIH/VRC) [C]'; 'Chopra Nandita (NIH/NIAID) [E]'; 'Graham, Barney (NIH/VRC) [E]';



(b) (4)

**Subject:** Long term plan to address (b) (4) and COVID

Dear (b) (4)

Please interact with Jason Gall whom Barney has connected and then give him sequence.  
Please make sure (b) (4) is there.

Also if you can work with him for other (b) (4)  
(b) (4)

Regards,

(b) (4), (b) (6)

(b) (4), (b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 11 Apr 2020 15:42:38 +0000  
**To:** (b) (6)t  
**Subject:** RE: Email address - VRCCoVTrial@nih.gov

Sorry about that. I wrote the wrong email address. It is:

[VRCCOVIDtrials@nih.gov](mailto:VRCCOVIDtrials@nih.gov) or  
[Vaccines@nih.gov](mailto:Vaccines@nih.gov) or  
1-866 833-LIFE (5433)

Thanks for letting me know.

Take care,

Barney

---

**From:** (b) (6)  
**Sent:** Saturday, April 11, 2020 9:13 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Subject:** Email address - VRCCoVTrial@nih.gov

Good morning, Dr. Barney Graham:

I am getting failed delivery messages associated with the email address 'VRCCoVTrial@nih.gov' to indicate the address is invalid. I received the email address from your presentation to the Men's Bible Study on the Coronavirus last week.

Best regards,

(b) (6)  
Email: (b) (6)

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 5 Feb 2020 14:02:15 +0000  
**To:** Beanan, Maureen (NIH/NIAID) [E]  
**Subject:** Tentative: Meeting with Ralph Baric to Discuss Universal Coronavirus Vaccine

I'll be in Geneva. I can try.

BG

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 7 Apr 2020 19:52:39 +0000  
**To:** Nabel, Gary /US  
**Cc:** Mascola, John (NIH/VRC) [E]; Shiver, John /US; Wei, Chih-Jen /US  
**Subject:** Re: Our influenza review

Thanks Gary. Will do.

Barney

Sent from my iPhone

On Apr 7, 2020, at 3:32 PM, Nabel, Gary /US (b) (6) wrote:

Hi All,

After all your work, I wanted to share a copy of our influenza review that was just published this month in Nature Reviews. It has all of the corrections we discussed and is now available on line.

Thanks again for your effort. Barney, perhaps your office could forward it to Michelle as well?

The urgency of influenza has receded from everyone's memory during our challenge with COVID, but I expect it will one day again be considered a priority. Hope this will help the cause...

Best

Gary

<Wei et al., Influenza Vaccines Review Nature Rev. 2020.pdf>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 28 Mar 2020 21:41:55 +0000  
**To:** Lawrence Wright  
**Subject:** RE: Writer contacting you about me...  
**Attachments:** DS-Cav1 Clinical trial VRC 317 Science 2019.pdf, RSV Review Immunity 2019.pdf, Structure=Based Vaccine Design 2019.pdf

Hi Larry,

I forgot to send the RSV papers.

Barney

-----Original Message-----

From: Lawrence Wright (b) (6) >  
Sent: Tuesday, March 24, 2020 3:25 PM  
To: Graham, Barney (NIH/VRC) [E] (b) (6) >  
Subject: Re: Writer contacting you about me...

That'd be great, just call my landline if you will, whenever you're free.

(b) (6)

> On Mar 24, 2020, at 2:22 PM, Graham, Barney (NIH/VRC) [E] <(b) (6)> wrote:

>

> Thanks. Let's try to talk a little after 5:30.

>

> BG

>

>

>

>

> Sent from my iPhone

>

>> On Mar 24, 2020, at 2:55 PM, Lawrence Wright (b) (6) wrote:

>>

>> Barney, a writer for New York Magazine, Lila Shapiro, is writing a profile of me, and she wanted to contact you. Up to you if you talk to her, I just want you to be aware.

>>

>> Let's talk whenever you have a moment.

>>

>> Larry



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 4 Mar 2020 23:58:54 +0000  
**To:** Mascola, John (NIH/VRC) [E]  
**Cc:** Ledgerwood, Julie (NIH/NIAID) [E]; Bok, Karin (NIH/VRC) [E]; Koup, Richard (NIH/VRC) [E]  
**Subject:** Re: NIAID Planning for Activities Related to WHO Collaborating Center Designation

I think you emailed the 3 best choices to do this. Julie and Karin and I can discuss best way to cover.

BG

Sent from my iPhone

On Mar 4, 2020, at 6:28 PM, Mascola, John (NIH/VRC) [E] (b) (6) wrote:

Can I ask for suggestions, or a volunteer?

Thanks,  
John

---

**From:** Handley, Gray (NIH/NIAID) [E] (b) (6)>  
**Sent:** Wednesday, March 4, 2020 4:36 PM  
**To:** Lane, Cliff (NIH/NIAID) [E] (b) (6)>; Erbelding, Emily (NIH/NIAID) [E] (b) (6); Holland, Steven (NIH/NIAID) [E] (b) (6)>; Rotrosen, Daniel (NIH/NIAID) [E] (b) (6); Dieffenbach, Carl (NIH/NIAID) [E] (b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6)  
**Cc:** Auchincloss, Hugh (NIH/NIAID) [E] (b) (6)>; NIAID BUGS (b) (6); Read, Sarah (NIH/NIAID) [E] (b) (6)>; Barron, Karyl (NIH/NIAID) [E] (b) (6); Bok, Karin (NIH/VRC) [E] <(b) (6)>; Dominique, Joyelle (NIH/NIAID) [E] (b) (6); Adomako, Melissa (NIH/NIAID) [C] (b) (6); Touchette, Nancy (NIH/NIAID) [E] (b) (6)>; (b) (6) (b) (6)>; Marston, Hilary (NIH/NIAID) [E] <(b) (6)>; Bushar, Nicholas (NIH/NIAID) [E] (b) (6)>  
**Subject:** NIAID Planning for Activities Related to WHO Collaborating Center Designation

Friends,

As you probably have heard, after a six-year effort started by DIR and DCR, NIAID has finally been designated a "WHO Collaborating Center for Emerging Infectious Disease Response Research and Preparedness" (Letter attached).

Attached is the agreed WHO Designation Form, which identifies six areas of potential collaboration:

- Provide research expertise prior to and during initial, on-site assessments of infectious disease outbreaks
- Support WHO in the accelerated development of WHO R&D Blueprint pathogen-specific research protocols, SOPs, and CRFs for priority pathogens
- Contribute to WHO-led outbreak preparedness in timely EID pathogen identification, diagnosis and characterization, using reference techniques, molecular biology, serology, and pathogen isolation
- Support clinical research response by working with WHO and Member states to develop pathogen-specific EID research protocols for rapid implementation during outbreaks
- Assess models and conduct laboratory studies relevant to EIDs
- Provide expert knowledge to WHO emergency response and preparedness activities

We anticipate that only some of the activities we undertake for and with WHO will fit within the Collaborating Center (CC) mandate. We also anticipate that WHO will be asking us for CC input quite soon, particularly during the COVID-19 response. Therefore, we need to plan for NIAID engagement.

After consulting with Hugh and others, we have decided to set up a small CC coordinating committee under the existing Multilateral Coordination Working Group, which is managed by the Office of Global Research. This coordinating committee will only meet as needed, usually virtually, when there is a CC related request or need. Please identify one or two individuals who can represent your Division or Center on this committee. The members should be able to serve as a liaison with your Division/Center and make recommendations related to NIAID responses to WHO requests.

Nancy Touchette will support the CC coordinating committee and will set up a request and response tracking system to keep everyone informed. Once members of the committee are identified, Nancy will convene an organizational meeting and solicit information to add to our current tracking of WHO-related activities. She will work with the committee members to identify which activities – past, current and anticipated – fit within the CC scope.

Because we anticipate WHO CC requests coming very soon, please identify your coordinating committee representative by March 9.

Please let me know if you have any questions or concerns.

Thanks.

Gray

<NIAID WHOCC Designation form 31Jan2020 (002).pdf>  
<USA 447 des 2020.pdf>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 11 Mar 2020 23:18:02 +0000  
**To:** Andrea Carfi  
**Subject:** RE: Are you selecting SARS-CoV-2 (b) (4)?

We have (b) (4).

BG

-----Original Message-----

From: Andrea Carfi (b) (6)  
Sent: Wednesday, March 11, 2020 7:09 PM  
To: Graham, Barney (NIH/VRC) [E] (b) (6)>  
Subject: Re: Are you selecting SARS-CoV-2 (b) (4)

Ok thanks. I understand that access to (b) (4) has been more challenging than perhaps expected.  
Best,  
Andrea

> On Mar 11, 2020, at 6:43 PM, Graham, Barney (NIH/VRC) [E] (b) (6)> wrote:

>  
> We are working on it. Still a ways to go.

>  
> BG

>  
>  
>

> -----Original Message-----

> From: Andrea Carfi <(b) (6)>  
> Sent: Wednesday, March 11, 2020 2:11 PM  
> To: Graham, Barney (NIH/VRC) [E] (b) (6)>  
> Subject: Are you selecting SARS-CoV-2 (b) (4)

>  
>  
>  
>

> P Please consider the environment before printing this email

>  
>

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>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 16 Jan 2020 22:36:53 +0000  
**To:** Marston, Hilary (NIH/NIAID) [E]  
**Subject:** Accepted: Wuhan Coronavirus Response Small group

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 16 Apr 2020 22:13:23 +0000  
**To:** Marston, Hilary (NIH/NIAID) [E]  
**Cc:** Mascola, John (NIH/VRC) [E]; Ledgerwood, Julie (NIH/NIAID) [E]; Bok, Karin (NIH/VRC) [E]  
**Subject:** perspectives  
**Attachments:** COVID-19 viewpoint for JCI \_ final.pdf, Risk-benefit for COVID-19 Science 2020 \_ final.pdf

Hi Hilary,

I submitted some invited commentaries today one to JCI (pandemic preparedness) and the other to Science (Risk:benefit). Thought you (and Tony) might like to see. I'm trying to avoid Tony's inbox. I don't think there is anything too controversial or surprising.

Take care,

Barney

\*\*\*\*\*

Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center  
Chief, Viral Pathogenesis Laboratory  
National Institute of Allergy and Infectious Diseases, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502  
Bethesda, MD 20892-3017  
Phone: (b) (6)  
URL: <https://www.niaid.nih.gov/research/barney-graham-md-phd>

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**From:** (b) (6)  
**Sent:** Sun, 22 Mar 2020 09:21:18 -0400  
**To:** Christian Mandl  
**Subject:** Re: SARS-CoV-2 stabilizing mutations

Yes, if you do the (b) (4)  
(b) (4) You then have to (b) (4)  
(b) (4) You also need to (b) (4)  
(b) (4)

Barney

Sent from my iPhone

On Mar 22, 2020, at 8:30 AM, Christian Mandl (b) (6) > wrote:

PS: or are these simply the (b) (4)  
(b) (4)?

Sorry to bother you in these busy days. Just want to make sure we are not over-looking information here  
Best, Christian

**Christian W Mandl, PhD, MD**

Chair, Scientific Advisory Board

Themis Bioscience GmbH

email: (b) (6)

cell: (b) (6)

[www.themisbio.com](http://www.themisbio.com)

On Mar 21, 2020, at 6:51 PM, Christian Mandl (b) (6) > wrote:

Dear Barney,  
Themis is making a (b) (4)  
(b) (4)  
It would make sense to (b) (4)



Are these (b) (4)? Could you share the information or point me in the right direction?

Thank you so much. Best wishes, Christian

**Christian W Mandl, PhD, MD**

Chair, Scientific Advisory Board

Themis Bioscience GmbH

email: (b) (6)

cell: (b) (6)

[www.themisbio.com](http://www.themisbio.com)

<pnas.201707304.pdf>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 15:13:34 +0000  
**To:** Kathleen Neuzil  
**Subject:** FW: Interview request: Reuters,

FYI

BG

---

**From:** Erbeling, Emily (NIH/NIAID) [E] (b) (6)>  
**Sent:** Saturday, March 7, 2020 12:11 PM  
**To:** Beigel, John (NIH) [E] (b) (6)  
**Cc:** Routh, Jennifer (NIH/NIAID) [E] (b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6)>; Folkers, Greg (NIH/NIAID) [E] (b) (6) Graham, Barney (NIH/VRC) [E] (b) (6)>; Hiatt, Nissa (NIH/VRC) [C] (b) (6)>; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>; NIAID COGCORE <COGCORE@mail.nih.gov>; NIAID Media Inquiries <mediainquiries@niaid.nih.gov>; Cassetti, Cristina (NIH/NIAID) [E] (b) (6)  
**Subject:** Re: Interview request: Reuters,

Agree with John B. (b) (5)

Sent from my iPad

On Mar 7, 2020, at 11:32 AM, Beigel, John (NIH) [E] (b) (6)> wrote:

I would either re-phrase both or remove them:

Suggest reword the first as: (b) (5)

.

Suggest reword the second as: (b) (5)

John

--

**John Beigel, M.D.**  
Associate Director for Clinical Research  
Division of Microbiology and Infectious Diseases

National Institute of Allergy and Infectious Diseases (NIAID)

Phone: (b) (6)

email: (b) (6)

---

**From:** "Routh, Jennifer (NIH/NIAID) [E]" <(b) (6)>

**Date:** Saturday, March 7, 2020 at 11:19 AM

**To:** Emily Erbelding <(b) (6)>, "Mascola, John (NIH/VRC) [E]"  
(b) (6)

**Cc:** Gregory Folkers (b) (6), "Graham, Barney (NIH/VRC) [E]"  
(b) (6), "Hiatt, Nissa (NIH/VRC) [C]" (b) (6), "Corbett,  
Kizzmekia (NIH/VRC) [E]" (b) (6)>, NIAID COGCORE  
<[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>, NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>, John Beigel  
(b) (6)>, "Cassetti, Cristina (NIH/NIAID) [E]" (b) (6)

**Subject:** RE: Interview request: Reuters,

Just to confirm – are these points correct or should I remove from the note? I'd like to send Julie information AND connect her with Dr. Erbelding.

(b) (5)

Jennifer Routh [E]  
News and Science Writing Branch  
Office of Communications and Government Relations  
National Institute of Allergy and Infectious Diseases (NIAID)  
NIH/HHS  
31 Center Drive Room 7A17C  
Bethesda, MD 20892  
Direct: (b) (6)  
(b) (6)

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---

**From:** Routh, Jennifer (NIH/NIAID) [E]

**Sent:** Friday, March 6, 2020 6:35 PM

**To:** Erbelding, Emily (NIH/NIAID) [E] (b) (6)>; Mascola, John (NIH/VRC) [E]  
(b) (6)>

**Cc:** Folkers, Greg (NIH/NIAID) [E] (b) (6); Graham, Barney (NIH/VRC) [E]  
(b) (6)>; Hiatt, Nissa (NIH/VRC) [C] (b) (6)>; Corbett, Kizzmekia  
(NIH/VRC) [E] (b) (6)>; NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media  
Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>; Beigel, John (NIH) [E] (b) (6); Cassetti,

Cristina (NIH/NIAID) [E] (b) (6)

**Subject:** RE: Interview request: Reuters,

Thanks, Dr. Erbeling. Yes I agree with Greg I think a conversation to clarify some of these points would be ideal. I will send the interview for clearance now so we have it. Could VRC & DMID confirm Greg's additions in red, and then I can send a note to Julie that would include the information and also suggest she connect with Dr. Erbeling for an interview over the weekend?

Jennifer Routh [E]  
News and Science Writing Branch  
Office of Communications and Government Relations  
National Institute of Allergy and Infectious Diseases (NIAID)  
NIH/HHS  
31 Center Drive Room 7A17C  
Bethesda, MD 20892  
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---

**From:** Erbeling, Emily (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, March 6, 2020 6:20 PM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6)  
**Cc:** Folkers, Greg (NIH/NIAID) [E] (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6); Routh, Jennifer (NIH/NIAID) [E] (b) (6); Hiatt, Nissa (NIH/VRC) [C] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6); NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>; Beigel, John (NIH) [E] (b) (6); Cassetti, Cristina (NIH/NIAID) [E] (b) (6)  
**Subject:** Re: Interview request: Reuters,

Jennifer, I'm happy to talk to her this wkd to clarify if that would be helpful.

On Mar 6, 2020, at 6:15 PM, Mascola, John (NIH/VRC) [E] (b) (6) wrote:

Nice suggestion Greg.

---

**From:** Folkers, Greg (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, March 6, 2020 6:14 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6); Mascola, John (NIH/VRC) [E] (b) (6); Routh, Jennifer (NIH/NIAID) [E] (b) (6); Erbeling, Emily (NIH/NIAID) [E] (b) (6); Hiatt, Nissa (NIH/VRC) [C] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Cc:** NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>; Beigel, John (NIH) [E] (b) (6); Cassetti, Cristina (NIH/NIAID) [E] (b) (6)

(b) (6)

**Subject:** RE: Interview request: Reuters,

Jen, It might be best if

(b) (5)

This is how would frame it. **Language in red I am not sure of:**

- Julie, apologies for the delay in getting back to you. We are all under water here with COVID-19 work.
- NIAID investigators have conducted preclinical immunogenicity testing of the mRNA-1273 vaccine candidate in mouse models. These studies show that the vaccine produces a potent antibody response against the COVID-19 virus.

(b) (5)

---

**From:** Graham, Barney (NIH/VRC) [E] <(b) (6)>

**Sent:** Friday, March 6, 2020 5:59 PM

**To:** Mascola, John (NIH/VRC) [E] (b) (6)>; Routh, Jennifer (NIH/NIAID) [E]

(b) (6); Erbelding, Emily (NIH/NIAID) [E] (b) (6)>; Folkers, Greg



(NIH/NIAID) [E] (b) (6); Hiatt, Nissa (NIH/VRC) [C] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>

**Cc:** NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>; Beigel, John (NIH) [E] (b) (6); Cassetti, Cristina (NIH/NIAID) [E] (b) (6)>

**Subject:** RE: Interview request: Reuters,

I'm OK with John's edits.

Barney

---

**From:** Mascola, John (NIH/VRC) [E] (b) (6)>

**Sent:** Friday, March 6, 2020 5:48 PM

**To:** Routh, Jennifer (NIH/NIAID) [E] (b) (6); Erbelding, Emily (NIH/NIAID) [E] (b) (6); Folkers, Greg (NIH/NIAID) [E] (b) (6); Hiatt, Nissa (NIH/VRC) [C] (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>

**Cc:** NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>; Beigel, John (NIH) [E] <(b) (6)>; Cassetti, Cristina (NIH/NIAID) [E] (b) (6)

**Subject:** RE: Interview request: Reuters,

Some suggestions in red.

(b) (5)

---

**From:** Routh, Jennifer (NIH/NIAID) [E] (b) (6)

**Sent:** Friday, March 6, 2020 5:44 PM

**To:** Erbelding, Emily (NIH/NIAID) [E] (b) (6); Mascola, John (NIH/VRC) [E] (b) (6); Folkers, Greg (NIH/NIAID) [E] (b) (6); Hiatt, Nissa (NIH/VRC) [C] (b) (6); Graham, Barney (NIH/VRC) [E] <(b) (6)>; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)

**Cc:** NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>; Beigel, John (NIH) [E] (b) (6); Cassetti, Cristina (NIH/NIAID) [E] (b) (6)

**Subject:** RE: Interview request: Reuters,



Thanks – revised below.

(b) (5)?

(b) (5)

Jennifer Routh [E]  
News and Science Writing Branch  
Office of Communications and Government Relations  
National Institute of Allergy and Infectious Diseases (NIAID)  
NIH/HHS  
31 Center Drive Room 7A17C  
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---

**From:** Erbeling, Emily (NIH/NIAID) [E] <(b) (6)>

**Sent:** Friday, March 6, 2020 5:08 PM

**To:** Routh, Jennifer (NIH/NIAID) [E] (b) (6); Mascola, John (NIH/VRC) [E] (b) (6); Folkers, Greg (NIH/NIAID) [E] (b) (6); Hiatt, Nissa (NIH/VRC) [C] (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)

**Cc:** NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>; Beigel, John (NIH) [E] (b) (6); Cassetti, Cristina (NIH/NIAID) [E]

(b) (6)>

**Subject:** RE: Interview request: Reuters,

(b) (5)

Emily Erbeling, M.D., M.P.H.  
Director, Division of Microbiology and Infectious Diseases

NIAID/NIH  
5601 Fishers Lane  
Rockville, MD 20852  
Tel: (b) (6)

---

**From:** Routh, Jennifer (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, March 6, 2020 4:59 PM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6); Folkers, Greg (NIH/NIAID) [E] (b) (6); Hiatt, Nissa (NIH/VRC) [C] (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Cc:** NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>; Beigel, John (NIH) [E] (b) (6); Erbeling, Emily (NIH/NIAID) [E] (b) (6); Cassetti, Cristina (NIH/NIAID) [E] (b) (6)  
**Subject:** RE: Interview request: Reuters,  
**Importance:** High

All: Julie came back to me with this today for awareness. I am looping in DMID due to new line of questioning about selecting Seattle.

I wanted to give you one more opportunity to respond. Our story is likely running **Monday**. It is going to say that the consensus from the WHO meeting last month was that companies could cautiously proceed with human trials of coronavirus vaccine before doing the animal studies needed to rule out antibody-dependent enhancement if these vaccines are introduced in areas with very low risk of transmission to mitigate risk. NIAID's trial is set to start in Seattle, which has had the most cases of ADE in the United States and where community transmission is likely occurring. Experts have told us the animal models have not been created to rule out ADE, and we know Moderna's IND has been approved. This suggests patients in this trial may be at increased risk of ADE, given the location and risk of encountering the virus. Have you ruled out the risk of ADE in animal models? **By selecting this location, are you putting volunteers at increased risk of ADE in this trial? If not, what is your rationale? Why have you selected Seattle, a location where the virus is spreading?**

**Could we respond with the following:**

**NIAID investigators have conducted** (b) (5)  
(b) (5)  
(b) (5) **have not been conducted. NIAID investigators have participated** (b) (5)  
(b) (5)  
(b) (5). **[Need DMID input to explain** (b) (5)  
(b) (5). **We need to** (b) (5)]

Jennifer Routh [E]  
News and Science Writing Branch  
Office of Communications and Government Relations  
National Institute of Allergy and Infectious Diseases (NIAID)  
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31 Center Drive Room 7A17C

Bethesda, MD 20892

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---

**From:** Mascola, John (NIH/VRC) [E] (b) (6)

**Sent:** Thursday, March 5, 2020 3:43 PM

**To:** Folkers, Greg (NIH/NIAID) [E] (b) (6); Routh, Jennifer (NIH/NIAID) [E] (b) (6); Hiatt, Nissa (NIH/VRC) [C] (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)

**Cc:** NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>

**Subject:** RE: Interview request: Reuters,

As Barney noted, this question and its answer may be more nuanced.

(b) (5) we have not done (b) (5).

Perhaps we can make a few point

- (b) (5) does not know (b) (5)  
(b) (5)
- NIAID investigators have participated (b) (5)
- NIAID will (b) (5)  
(b) (5)

John

---

**From:** Folkers, Greg (NIH/NIAID) [E] (b) (6)

**Sent:** Thursday, March 5, 2020 12:26 PM

**To:** Routh, Jennifer (NIH/NIAID) [E] <(b) (6)>; Hiatt, Nissa (NIH/VRC) [C] (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6); Mascola, John (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)

**Cc:** NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>

**Subject:** RE: Interview request: Reuters,

it seems that there are two key points

(b) (5)



---

**From:** Routh, Jennifer (NIH/NIAID) [E] (b) (6)  
**Sent:** Thursday, March 5, 2020 12:15 PM  
**To:** Hiatt, Nissa (NIH/VRC) [C] (b) (6); Graham, Barney (NIH/VRC) [E]  
<(b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia  
(NIH/VRC) [E] (b) (6)>  
**Cc:** NIAID COGCORE <[COGCORE@mail.nih.gov](mailto:COGCORE@mail.nih.gov)>; NIAID Media Inquiries <[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>  
**Subject:** RE: Interview request: Reuters,  
**Importance:** High

All – Julie Steenhuisen from Reuters has come back and said she does not need an interview but would like this question answered:

**“Has NIAID has done safety trials in animal models to confirm that the vaccine (mRNA vaccine) does not cause antibody-mediated enhancement, or will you have them done before starting human trials?”**

Her deadline was noon today but I will tell her we are working on getting her the information. Can VRC provide some information that will help us answer this question? I would consider generally what issues are at stake here (b) (5)

(b) (5)

Generally we should be prepared for more questions on this as we announce clinical testing (as early as next week).

Thanks,  
Jen

Jennifer Routh [E]  
News and Science Writing Branch  
Office of Communications and Government Relations  
National Institute of Allergy and Infectious Diseases (NIAID)  
NIH/HHS  
31 Center Drive Room 7A17C  
Bethesda, MD 20892  
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---

**From:** Deatrick, Elizabeth (NIH/NIAID) [C] (b) (6)  
**Sent:** Wednesday, March 4, 2020 3:45 PM  
**To:** Hiatt, Nissa (NIH/VRC) [C] (b) (6); Prince, Tasheema (NIH/VRC) [C]  
(b) (6)  
**Cc:** Marston, Hilary (NIH/NIAID) [E] (b) (6); NIAID Media Inquiries

<[mediainquiries@niaid.nih.gov](mailto:mediainquiries@niaid.nih.gov)>

**Subject:** Interview request: Reuters,

Hi Nissa,

We've received a media request from a reporter at Reuters, Julie Steenhuysen, who has previously had conversations with Dr. Fauci about the coronavirus response, but now has a vaccine-specific question:

"Dr. Fauci and I spoke last week about the risk of antibody-dependent enhancement in the new coronavirus vaccines. Since we spoke, I learned that some drugmakers intend to start phase 1 testing of coronavirus candidate vaccines before they have been tested in animal models for ADE. This was one of the consensus agreements that came out of the WHO R&D meeting. The reason is that it takes time to develop the right animal models. My question is will NIAID be putting the Moderna vaccine into humans before this kind of testing is done? Dr Fauci said ADE is always a risk and that's why you go slowly, so my guess is that you are doing the animal studies first. Can you please confirm this?"

Julie's deadline is early tomorrow. I'm thinking we could probably answer her question in a short phone call or emailed statement from Dr. Graham or Dr. Corbett, if they're interested. Should I send for clearance, or let the reporter know we won't be able to get to this?

Best,

Elizabeth Deatrick

*Scientific Communications Editor*

*Employee of Cape Fox Shared Services*

*Contracted to work for the National Institute of Allergy and Infectious Diseases (NIAID)*

(b) (6)

(b) (6)

*Please note that I am not a spokesperson for NIAID and should not be quoted as such.*

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 30 Mar 2020 18:53:27 +0000  
**To:** Morabito, Kaitlyn (NIH/VRC) [E]  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]; Alvarado, Gabriela (NIH/VRC) [C]; Gall, Jason (NIH/VRC) [C]; Carlton, Kevin (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]  
**Subject:** Re: Coronavirus (b) (5), (b) (4), NIAID transfer)

We should share with Battelle under Judy's agreement of choice.

Barney

Sent from my iPhone

On Mar 30, 2020, at 2:49 PM, Morabito, Kaitlyn (NIH/VRC) [E] <(b) (6)> wrote:

Hi All,

Any reason not to share our (b) (5), (b) (4) with Battelle for DMID to use for their contract? I assume we would be able to restrict the use to only the DMID contract. The DMID contract is likely to support (b) (5), (b) (4) by DMID.

Kaitlyn

---

**From:** "Lathey, Janet (NIH/NIAID) [E]" (b) (6)>  
**Date:** Monday, March 30, 2020 at 2:34 PM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6)>  
**Subject:** RE: Coronavirus (b) (5), (b) (4), NIAID transfer)

Hi Kaitlyn,

My (b) (5), (b) (4), at Battelle will be awarded in about 2 weeks. We have included in the (b) (5), (b) (4).  
(b) (5), (b) (4)

Thanks,  
Janet



---

**From:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >  
**Sent:** Thursday, February 27, 2020 10:51 AM  
**To:** Lathey, Janet (NIH/NIAID) [E] (b) (6); Taylor, Kimberly (NIH/NIAID) [E] (b) (6) >; Marston, Hilary (NIH/NIAID) [E] (b) (6) >; Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Cc:** Wolfram, Larry (NIH/NIAID) [E] (b) (6) >; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Subject:** Re: Coronavirus (b) (5), (b) (4), NIAID transfer)

Hi Janet,

Yes, I can be the contact for that is well. We're in the final stages of (b) (5), (b) (4), and will be receiving (b) (5), (b) (4) today through early next week. Once we confirm (b) (5), (b) (4), we'll be able to share the protocol. This should be available around the end of next week or the week after.

Thanks,  
Kaitlyn

---

**From:** "Lathey, Janet (NIH/NIAID) [E]" (b) (6)  
**Date:** Thursday, February 27, 2020 at 10:46 AM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6) >, "Taylor, Kimberly (NIH/NIAID) [E]" (b) (6), Hilary Marston <(b) (6)>, Barney Graham (b) (6) >  
**Cc:** "Wolfram, Larry (NIH/NIAID) [E]" <(b) (6)>  
**Subject:** RE: Coronavirus (b) (5), (b) (4), NIAID transfer)

Hi Kaitlyn,

I am currently putting together a DMID assay development task order, similar to what we did for (b) (5). One of assays we want to start with is an (b) (5), (b) (4). Barney mentioned an (b) (5), (b) (4) on a CoV-2 call this morning that was working well. Would you also be the contact for (b) (5), (b) (4)?

Thanks,  
Janet

---

**From:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >  
**Sent:** Thursday, February 27, 2020 10:21 AM  
**To:** Taylor, Kimberly (NIH/NIAID) [E] (b) (6) >; Marston, Hilary (NIH/NIAID) [E] (b) (6) >; Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Cc:** Wolfram, Larry (NIH/NIAID) [E] (b) (6) >; Lathey, Janet (NIH/NIAID) [E] (b) (6) >  
**Subject:** Re: Coronavirus (b) (5), (b) (4) NIAID transfer)

Hi Kim,

Yes, I can be the contact for this. I'll discuss with Barney if we prefer to (b) (5), (b) (4), or Batelle directly.

Thanks,  
Kaitlyn

---

**From:** "Taylor, Kimberly (NIH/NIAID) [E]" <(b) (6)>  
**Date:** Thursday, February 27, 2020 at 10:19 AM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6) Hilary Marston  
(b) (6)>, Barney Graham (b) (6)  
**Cc:** "Wolfraim, Larry (NIH/NIAID) [E]" (b) (6)>, "Lathey, Janet (NIH/NIAID) [E]"  
(b) (6)  
**Subject:** RE: Coronavirus (b) (5), (b) (4), NIAID transfer)

Hi Kaitlyn-

Thanks for the info... can we tell Battelle that you are the appropriate person at the VRC to contact regarding the SOPs?

Kim

---

**From:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)>  
**Sent:** Thursday, February 27, 2020 8:58 AM  
**To:** Taylor, Kimberly (NIH/NIAID) [E] (b) (6)>; Marston, Hilary (NIH/NIAID) [E]  
(b) (6)>; Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Cc:** Wolfraim, Larry (NIH/NIAID) [E] (b) (6)>; Lathey, Janet (NIH/NIAID) [E]  
<(b) (6)>  
**Subject:** Re: Coronavirus (b) (5), (b) (4) NIAID transfer)

Hi Kim,

We're still working on optimizing our (b) (5), (b) (4), but are likely willing to share them once we've finalized them.

I'm a little surprised by the email since (b) (5), (b) (4)  
(b) (6)

Thanks,  
Kaitlyn

---

**From:** "Taylor, Kimberly (NIH/NIAID) [E]" (b) (6)>  
**Date:** Thursday, February 27, 2020 at 8:55 AM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6)>, Hilary Marston  
(b) (6)>, Barney Graham (b) (6)>  
**Cc:** "Wolfraim, Larry (NIH/NIAID) [E]" (b) (6) "Lathey, Janet (NIH/NIAID) [E]"

(b) (6)>

**Subject:** RE: Coronavirus (b) (5), (b) (4), NIAID transfer)

Hi again-  
Including Hillary and Barney... please see below.  
Thanks,  
Kim

---

**From:** Taylor, Kimberly (NIH/NIAID) [E]  
**Sent:** Wednesday, February 26, 2020 4:28 PM  
**To:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)  
**Cc:** Wolfrain, Larry (NIH/NIAID) [E] (b) (6); Lathey, Janet (NIH/NIAID) [E]  
(b) (6)  
**Subject:** FW: Coronavirus (b) (5), (b) (4), NIAID transfer)

Hi Kaitlyn,

Please see request below from Battelle—is this something that the VRC can help with? Or please provide an appropriate contact at the VRC.

Many thanks!  
Kim

---

**From:** Wolfrain, Larry (NIH/NIAID) [E] (b) (6)>  
**Sent:** Wednesday, February 26, 2020 3:21 PM  
**To:** Lathey, Janet (NIH/NIAID) [E] (b) (6)>; Taylor, Kimberly (NIH/NIAID) [E]  
(b) (6)>  
**Subject:** FW: Coronavirus (b) (5), (b) (4), NIAID transfer)

Janet, Kim, I received this email from Battelle asking if we could reach out to our intramural colleagues in an effort to expedite getting Battelle access to the SOWs for (b) (5), (b) (4)

What if anything can we do here? Please advise.

Thanks.

## Larry

**Larry Wolfrain, Ph.D.**

Program Officer/Health Scientist Administrator  
Biodefense Vaccines and other Biological Products Development Section  
Office of Biodefense, Research Resources, and Translational Research (OBRTR)  
DMID/NIAID/NIH  
5601 Fishers Lane, Office 8G46  
Rockville, MD 20852  
phone: (b) (6) Cell: (b) (6)  
email: (b) (6)  
Telework: Monday and Thursday (reachable at my cell phone number)

**Get Help Turning Your Discoveries into New Diagnostics, Vaccines, and Therapeutics:** Visit [DMID preclinical services](#) to see the full range of available services that provide access to research tools and technologies and preclinical and clinical services to facilitate product development.

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**From:** Altonen, Erin M (b) (6)  
**Sent:** Wednesday, February 26, 2020 1:12 PM  
**To:** Wolfram, Larry (NIH/NIAID) [E] (b) (6)>  
**Cc:** Cirimotich, Christopher M <(b) (6)>; Rudge Jr., Thomas L <(b) (6)>  
**Subject:** Coronavirus (b) (4), NIAID transfer)

Hello Larry,

We are in receipt of a (b) (4) The SOW will involve (b) (4) (b) (4)

VRC: Barney Graham, Kizzmekia Corbett  
NIAID: Marston, Hilary (NIH/NIAID) [E] <(b) (6)>

None of the names are familiar to me so I was wondering if you knew these individuals and if you would mind reaching out to get us quicker access to these SOPs? I realize this is a long shot, but thought I would see if you could assist. Thanks in advance.

Best,  
Erin

**Erin Altonen, PMP**

*Project/Program Manager*

Clinical and Nonclinical Research

Office: (b) (6) | Mobile: (b) (6)  
(b) (6)

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 24 Feb 2020 13:03:27 +0000  
**To:** Stein, Judy (NIH/VRC) [C]  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]; Morabito, Kaitlyn (NIH/VRC) [E]  
**Subject:** RE: Request for collaboration on (b) (4)

We will only send him the (b) (5)

(b) (5)

Barney

---

**From:** Stein, Judy (NIH/VRC) [C] (b) (6) >  
**Sent:** Monday, February 24, 2020 7:58 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >; Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >  
**Subject:** RE: Request for collaboration on (b) (4)

Hi Barney,  
I checked with Amy and we would need to provide at least a more specific description of the (b) (5) that we will send rather than the very general description that Rao requested. Will you send more than the SARS CoV 2 (b) (5) that we currently have?

What types of (b) (5)?

Thanks,  
Judy

**From:** Venigalla B Rao (b) (6)  
**Sent:** Sunday, February 23, 2020 2:57 PM  
**To:** Stein, Judy (NIH/VRC) [C] (b) (6) >  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6); Young, Monique (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>; Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E] (b) (6); Ralph A. Albano (b) (6); Petrik, Amy (NIH/NIAID) [E] <(b) (6)>  
**Subject:** Re: Request for collaboration on (b) (4)

Dear Judy,  
Many thanks for getting the SLA forward on a Sunday, greatly appreciate it. I have been in communication with Dr. Graham regarding reagents for both (b) (4). The types of materials are similar except that they come from different viruses. Therefore, I have revised the list of materials such that the SLA will cover these materials that Dr. Graham is willing to provide for our research.



Please note that the materials will be used for research purpose only, not for commercialization. Therefore, these fall under the umbrella of sharing materials among researchers, as per the regular NIH policies. Therefore, research materials even if they are under patent consideration can be exchanged under this policy.

I am attaching the revised statement of materials in the SLA. Please let me know if this is ok. I plan to meet with Ralph tomorrow for another reason and will also be able to explain any questions he may have.

With best regards,  
Rao

On Sun, Feb 23, 2020 at 12:58 PM Stein, Judy (NIH/VRC) [C] (b) (6) wrote:

Dear Ralph,

I have attached our standard patent pending SLA. Can you please complete the signature block, sign and email the pdf back to me.

Thanks very much.

Judy

Judy Stein, MBA, MSPH [C]

Strategic Planning and Development

Vaccine Research Center, NIAID, NIH

Tel: + (b) (6)

**From:** Venigalla B Rao (b) (6)

**Sent:** Sunday, February 23, 2020 8:42 AM

**To:** Graham, Barney (NIH/VRC) [E] (b) (6)

**Cc:** Young, Monique (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6); Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E] (b) (6); Stein, Judy (NIH/VRC) [C] <(b) (6)> Ralph A. Albano (b) (6)>

**Subject:** Re: Request for collaboration on (b) (4)

Dear Judy,

Good morning!

I know you have helped us in the past to execute SLAs for transfer of materials from Dr. Peter Kwong's lab. Therefore, I am reaching out to you to let me know how to proceed. If the SLA is sent to Mr. Ralph Albano, he will be able to turn it around in a short period of time.

Please let me know if you need anything from us.

Many thanks.

Rao

On Sat, Feb 22, 2020 at 2:21 PM Venigalla B Rao (b) (6) wrote:

That would be fabulous! I assume that it is a (b) (4) I am including Mr. Ralph Albano from CUA in the CC. He will review the SLA and execute it from our end. With regard to the materials to be transferred, (b) (4)

Many thanks.  
Rao

On Sat, Feb 22, 2020 at 2:10 PM Graham, Barney (NIH/VRC) [E] (b) (6) > wrote:  
Dr. Rao,

We have a (b) (4) that we have shared with other academic investigators. We have not made (b) (4). We will arrange to send you (b) (4) through an (b) (4).

Best wishes,

Barney

**From:** Venigalla B Rao (b) (6) >  
**Sent:** Thursday, February 20, 2020 10:05 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** Young, Monique (NIH/VRC) [E] (b) (6) >  
**Subject:** Re: Request for collaboration on (b) (4)

Dear Barney,  
I am following up my request on the possibility of receiving (b) (4). We have in the past signed SLAs from VRC for receiving (b) (4) materials. Please let me know and who might be in charge of processing the SLAs. I will be happy to contact that person(s) and move it forward.

Many thanks.  
Rao

On Tue, Feb 18, 2020 at 8:41 AM Venigalla B Rao (b) (6) > wrote:

Dear Barney,  
Good morning!

Having submitted the flu grant proposal, we are seriously considering applying the (b) (4). In fact, the (b) (4)

(b) (4)

I am hoping that you group can help us by providing either (b) (4)

(b) (4)

(b) (4) It would be useful to discuss this over the phone and clarify any questions you may have, which I would greatly appreciate.

With best regards,

Rao

On Sun, Feb 9, 2020 at 11:44 AM Venigalla B Rao (b) (6) > wrote:

Thanks for consideration, best of luck with your WHO meeting on Coronavirus.

Rao

On Sun, Feb 9, 2020 at 11:20 AM Graham, Barney (NIH/VRC) [E] (b) (6) > wrote:

Dr. Rao,

As noted in the last note, we won't have the bandwidth to collaborate, but can provide access to some reagents like the (b) (4)

The ability to collaborate is even more difficult now with the onset of the Wuhan CoV. I am out of town and headed to Geneva tomorrow for an emergency WHO meeting.

Barney

Sent from my iPhone

On Feb 9, 2020, at 11:09 AM, Venigalla B Rao (b) (6) wrote:

Dear Barney,

I am wondering if you will be able to provide a letter of collaboration. As I mentioned, please feel free to make any changes to the letter I sent to you last week. I will need the grant finalized and sent to the University office by Tuesday of this week. Greatly appreciate your consideration and letting me know.

With best regards,

Rao

On Tue, Feb 4, 2020 at 12:15 PM Venigalla B Rao (b) (6) > wrote:

Dear Barney,

To make things easier, I have prepared a draft of collaboration letter for your perusal, which I hope that you will be able to provide. This is merely a draft, please make

changes as you wish. I would appreciate it if you could add some specific information regarding the materials available at VRC that you could provide for our project. As written, it is quite general.

Please also note that challenges will be done at our university, you are not committing for that.

I know that your time is overstretched, therefore we do not need a conference call as long as you are basically ok with the letter. If you have any questions, please let me know.

With best regards,  
Rao

On Sat, Jan 25, 2020 at 8:25 PM Venigalla B Rao (b) (6) > wrote:

Dear Barney,

I understand, the Wuhan virus situation seems rather scary. Thank you all for the work you are doing to develop a potential vaccine fast.

Thank you for consideration regarding the (b) (4). The grant is due in the university office by ~Feb 10th.

Monique, please free to send me potential days and times for a phone call.

With best regards,  
Rao

On Sat, Jan 25, 2020 at 4:24 PM Graham, Barney (NIH/VRC) [E] <(b) (6)> wrote:

Dear Rao,

We have been consumed by the response to the Wuhan outbreak, and I will be out of town next week. I'll ask Monique Young to find time for a brief call sometime in February. As noted, we are already working beyond our bandwidth and a more involved collaboration beyond reagent sharing is not going to be possible at this time.

Best wishes,

Barney

**From:** Venigalla B Rao (b) (6) >

**Sent:** Tuesday, January 21, 2020 2:26 PM

**To:** Graham, Barney (NIH/VRC) [E] (b) (6)

**Subject:** Re: Request for collaboration on (b) (4)

Dear Barney,

Good afternoon!

I have a couple of questions that can be quickly clarified in a phone call. I would greatly appreciate it if you could give me a few minutes of your time as per your convenience. Please let me know.



Many thanks.  
Rao

On Wed, Jan 8, 2020 at 9:29 AM Venigalla B Rao (b) (6) > wrote:

Dear Barney,  
(please call me "rao")

Thanks for your email. Greatly appreciate extending your help with reagents, mAbs, and assay protocols. These would be very helpful for us. Regarding the (b) (4)

me know if in principle you can consider it, that is all that is needed at this point. DMID is a good source but they will not entertain any proposals for (b) (4)

MTA is not necessary at this point we are not there yet with specifics. At minimum, we are talking about at least a year. All I need now is a letter of collaboration stating that you will provide such and such for the proposed studies. I can draft a preliminary letter and send to you for consideration and feel free to make any changes you wish to make.

Many thanks.  
With best regards,  
Rao

On Wed, Jan 8, 2020 at 8:53 AM Graham, Barney (NIH/VRC) [E] (b) (6) > wrote:  
Hi Dr. Rao,

Thank you for your note and sorry I couldn't be there for the lecture a few months ago.

Your (b) (4) idea sounds interesting. However, we have a pipeline here that is already more than we can manage. We would be able to provide (b) (4) but we would not be able to (b) (4). DMID (extramural NIAId) recently announced the CIVICs program that is a consortium of academic sites focused on (b) (4) development and they may be able to help with this, but you would need to check with DMID.

Let me know if the reagents would be helpful to you and we could initiate an MTA.

Best wishes,

Barney

Sent from my iPhone

On Jan 6, 2020, at 5:14 PM, Venigalla B Rao (b) (6) wrote:

Dear Barney,

We communicated briefly through email in Sept '19 (below). After that, I had a chance to meet with and discuss further about the (b) (4) with your then colleague Dr. Michelle Crank. I am getting back to you and see whether you can help us by collaborating on the (b) (4)

I am preparing an R21 grant proposal for submission to NIH for the Feb '20 deadline. I would very much appreciate it if you could provide a letter of collaboration that would involve (b) (4)

I will be happy to put together a draft letter for your consideration. I will also be happy to discuss more details with you over the phone, or meet in person.

With best regards,  
Rao

Dr. Venigalla B. Rao  
Professor  
Department of Biology  
The Catholic University of America  
Washington, DC.

----- Forwarded message -----

From: **Venigalla B Rao** (b) (6) >  
Date: Mon, Sep 30, 2019 at 12:36 PM  
Subject: Rao HIV Fusion peptide paper  
To: Crank, Michelle (NIH/NIAID) [E] (b) (6) >

Michelle,  
I enjoyed your talk!!



Thank you very much for taking the time to meet with me today. As per our conversation, I am attaching the (b) (4)

I will send the animation by a separate email to increase the chances of transmission. Please let me know if you received it ok.

Best,  
Rao

On Mon, Sep 30, 2019 at 9:02 AM Crank, Michelle (NIH/NIAID) [E] (b) (6) wrote:  
Perfect. Thanks so much, and see you soon.  
Michelle

---

**From:** Venigalla B Rao (b) (6)  
**Date:** Monday, September 30, 2019 at 8:46 AM  
**To:** Michelle Crank (b) (6)>  
**Cc:** Lauren Bassaro (b) (6)>, Swati Jain (b) (6)  
**Subject:** Re: Meeting at Catholic

Good morning, Michelle!

After you come out of the Metro escalator, please walk a bit and cross the road. There is a security post at the corner. Walk straight up the hill (it is brand new paved, tiled, road). Biology is at the end of that block on left. There is a sign "McCort Ward Hall" at the end of that street (go past the Nursing-Biology sign). Enter the building near the McCort Ward sign, turn right and take two flights of stairs. Or, go through the double door after you turn right at the entrance and take the elevator on the left to 3rd floor. My office is in Rm 306.

I should be in office by ~9:40. Swati is my student. She will take you to the lecture room at ~10:50 or so.

My Cell# (b) (6), feel free to call me if there is a question.

Look forward to meeting you!

Rao

On Mon, Sep 30, 2019 at 6:32 AM Crank, Michelle (NIH/NIAID) [E] (b) (6) wrote:  
Good morning, yes I should be able to meet you at 10.  
I will be walking over from the metro and have not been to the biology building before, but on the map it seems to be immediately beside the metro exit.  
Which section of the building is your office in?  
Would you be able to direct me to the room for the seminar when we are finished, or I can let the student organizers know where I will be and maybe they can come meet me?  
I believe they would like me to arrive half an hour before my talk to load my slides.  
Many thanks.  
Michelle

---

**From:** Venigalla B Rao <(b) (6)>  
**Date:** Friday, September 27, 2019 at 5:23 PM

**To:** Michelle Crank [REDACTED] (b) (6)

**Subject:** Re: Meeting at Catholic

Sure, I will be in my office (Rm 306) by 10am. I could also come earlier than 10am if you prefer to meet early.

Thanks.

Rao

On Fri, Sep 27, 2019 at 4:19 PM Crank, Michelle (NIH/NIAID) [E] [REDACTED] (b) (6)> wrote:  
Hi Rao,

I would like to meet with you, but would it be possible to talk before my presentation rather than afterward? I have an obligation back at NIH at 2pm, so I won't be able to stay after lunch.

Thanks so much for contacting us.

Michelle C. Crank, M. D.  
Head, Translational Science Core  
Viral Pathogenesis Laboratory  
National Institutes of Health  
National Institute of Allergy and Infectious Disease  
Vaccine Research Center  
40 Convent Drive  
Building 40 / Room 2508 / MSC 3017  
Bethesda, MD 20892-3017  
Phone: [REDACTED] (b) (6)  
Cell: [REDACTED] (b) (6)  
Email: [REDACTED] (b) (6)

> On Sep 27, 2019, at 4:01 PM, Venigalla B Rao [REDACTED] (b) (6)> wrote:

>

> Dear Dr. Crank,

> I reached out to Dr. Barney Graham as he is scheduled to give a seminar at Catholic on Monday. But he informed me that you will be presenting the seminar instead (email below). My lab has some interest in developing a [REDACTED] (b) (4) I would be very much interested to meet with you as well, if possible, after your lunch meeting with students. Probably ~1:30 to 2pm. Please let me know if this works for you. I am attaching a couple of our recent papers that relate to the [REDACTED] (b) (4)

> Many thanks.

> Rao

> ----- Forwarded message -----

> From: Graham, Barney (NIH/VRC) [E] [REDACTED] (b) (6)<mailto:[REDACTED] (b) (6)>

> Date: Tue, Sep 24, 2019 at 3:54 PM

> Subject: RE: Meeting at Catholic

> To: Venigalla B Rao [REDACTED] (b) (6)<mailto:[REDACTED] (b) (6)>

>

>

> Dr. Rao,

>  
> Thank you for your email and for sharing your papers. I will look over them, and will enjoy learning more about (b) (4)  
>  
> Unfortunately, I had an obligation come up that I could not avoid, so my colleague who helps manage the influenza program will be giving the talk on Monday instead of me. Dr. Crank will show most of what I just showed 2 weeks ago at the international influenza meeting.  
>  
> Sorry I was unable to attend in person.  
>  
> Best wishes,  
>  
> Barney  
>  
>  
>  
> From: Venigalla B Rao (b) (6) <mailto:(b) (6)>  
> Sent: Tuesday, September 24, 2019 3:00 PM  
> To: Graham, Barney (NIH/VRC) [E] (b) (6) <mailto:(b) (6)>  
> Subject: Meeting at Catholic  
>  
> Dear Dr. Graham,  
> I am happy to know that you will be giving a talk at the Catholic University on Monday. I know Peter Kwong and his work for many years and I am also little bit familiar with the HIV and Flu vaccine work at VRC including yours. Although my lab is focused on (b) (4)  
>  
> I am attaching a couple of our recent papers.  
> I would be very much interested to meet with you, if time permits on Monday. Lunch with students will generally finish by ~1 to 1:30. If we can meet for about half an hour immediately after lunch, that would be great. You would still be able to leave CUA by ~2pm.  
> Please let me know if this is possible.  
> Looking forward to your talk on Monday.  
> With best regards,  
> Rao  
>  
> Dr. Venigalla B. Rao  
> Professor  
> Department of Biology  
> The Catholic University of America  
> Washington, DC, 20064.  
>  
> <Oct 2018 anthrax plague vaccine mBio.pdf>  
> <Aug 2019 Science Advances T4-AAV hybrid vector.pdf>  
> <2019 HIV structure Nature Communications.pdf>

**From:** (b) (6)  
**Sent:** Thu, 23 Apr 2020 20:39:53 -0400  
**To:** Hiatt, Nissa (NIH/VRC) [C]  
**Cc:** Prince, Tasheema (NIH/VRC) [C]  
**Subject:** Re: Vox Media Interview Request

Sounds fine to wait until we have data to discuss.

Barney

Sent from my iPhone

On Apr 23, 2020, at 4:15 PM, Hiatt, Nissa (NIH/VRC) [C] (b) (6) wrote:

Hi Barney,

OCGR NSWB just sent over a video interview request from Vox Media. They want to discuss COVID-19 vaccine development, and the biological basis of how the vaccine is supposed to function to induce immunity against COVID-19. The final interview would likely be around 6 minutes in length, and would be available on Quibi, which is a new service for streaming short videos to peoples' phones.

The OCGR News team recommends declining now and revisiting at a later date when results are available. They think Vox would be open to this and also noted that it is not a really high-priority interview. Please let me know how you would like to proceed with this one.

Best,  
Nissa

**Nissa Hiatt**

Communications

Vaccine Research Center, NIAID, NIH

40 Convent Drive, Bldg 40, Room 1100

Bethesda, MD 20892

Cell: (b) (6)

Office: (b) (6)

(b) (6)

<image001.png>



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 23 Dec 2019 16:38:38 +0000  
**To:** Cassetti, Cristina (NIH/NIAID) [E]; Embry, Alan (NIH/NIAID) [E]  
**Subject:** potential program officer  
**Attachments:** (b) (6)\_Oct 2019.pdf

Hi Cristina and Alan,

I spoke with this person recently and was already aware of her work in (b) (6). She originally trained with (b) (6) here on the Bethesda campus.

She has lab and industry experience and could function at a high level as a program officer especially within virology, particularly influenza. I thought maybe she could be a good fit for helping to manage some of the CIVICs program since I'm sure you could use more help now that it is online. She is doing fine at (b) (6) but misses NIH and a more academic environment.

Best wishes,

Barney

---

**From:** (b) (6)  
**Sent:** Monday, November 25, 2019 11:49 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** (b) (6)  
**Subject:** Referring a (b) (6) colleague

Dear Barney:

I am writing to share the resume of (b) (6), a colleague from (b) (6). (b) (6) would like to assess professional opportunities at the NIH and I have advised her that you would be able to provide a unique perspective.

With best wishes,

(b) (6)

Email: (b) (6)

Mobile: (b) (6)

(b) (6)

[Facebook](#) | [Twitter](#) | [LinkedIn](#)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 14 Feb 2020 21:52:20 +0000  
**To:** Jason McLellan;Valda Vinson  
**Subject:** RE: Coronavirus research for Science

The name is a bit of a problem. The taxonomists have called it SARS-CoV-2, but this is a problem for lab inventories and management of the original SARS-CoV which has a select agent status. At the same time without coordinating with the taxonomists, WHO named the disease COVID-19. Some people are advocating for a new nomenclature. If we have SARS and CoV in the index terms, it may be best to leave it as 2019-nCoV.

Barney

---

**From:** Jason McLellan (b) (6)  
**Sent:** Friday, February 14, 2020 4:38 PM  
**To:** Valda Vinson <[vvinson@aaas.org](mailto:vvinson@aaas.org)>  
**Cc:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Subject:** RE: Coronavirus research for Science

Thanks Valda,

That all sounds great, and we will submit a highly polished manuscript on Monday following all guidelines.

What name do you want us to use for the virus? It seems it should be SARS-CoV-2. Can you confirm?

I'll be in touch with any questions throughout the weekend.

Best regards,  
Jason

---

**From:** Valda Vinson <[vvinson@aaas.org](mailto:vvinson@aaas.org)>  
**Sent:** Friday, February 14, 2020 3:33 PM  
**To:** Jason McLellan (b) (6)  
**Cc:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Subject:** RE: Coronavirus research for Science

Hi Jason,

Just a few things

1. Please be sure all the authors fill out author and coi forms by Monday.
2. Be sure you follow all the style guidelines – eg placement of materials and methods and acknowledgements

3. Please have accession numbers in place in the acknowledgements
4. A very small thing, but for “up” and “down” use quotes on first use, but not after that.

I’m just trying to be sure the paper comes in as clean as possible to avoid any delays. I will actually be at a meeting in the Bahamas (flying out on Sunday) but I will be checking in regularly. Looking at our logistics, I think if all goes smoothly we would plan to release on Wednesday morning. The paper will need to be templated and staged on Tuesday and we prefer not to release too late in the day.

Feel free to contact me with any questions. I will be checking e-mail tomorrow, on Sunday I should be back online later in the day.

Thanks  
Valda

---

**From:** Jason McLellan (b) (6)  
**Sent:** Friday, February 14, 2020 3:04 PM  
**To:** Valda Vinson <[vvinson@aaas.org](mailto:vvinson@aaas.org)>  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6); Meagan Phelan <[mphelan@aaas.org](mailto:mphelan@aaas.org)>  
**Subject:** RE: Coronavirus research for Science

Hi Valda,

Good timing. Thanks very much for your edits to the manuscript. Regarding your question in the text, Flu HA and CoV S are both class I fusion proteins that serve the same function of receptor-binding and membrane fusion (and both are the targets of neutralizing antibodies and vaccine design).

The requests from Reviewer #1 are straightforward. We’ll have to remake some figures but it won’t be difficult. If we send you the revised text and figures on Monday would that work for a Tuesday roll-out?

I’ll remind everyone not to mention that the manuscript is at Science before you release it and I’ll be sure to let reporters know that the bioRxiv version is not peer reviewed. I contacted BioRxiv yesterday and they said they have a lot of manuscripts to review and they don’t know when they will put ours online. Seems odd, I thought this was supposed to be a rapid method for disseminating information...

I look forward to hearing from you, and let me know if you want to have a quick chat about anything.

Best regards,  
Jason

---

**From:** Valda Vinson <[vvinson@aaas.org](mailto:vvinson@aaas.org)>  
**Sent:** Friday, February 14, 2020 1:51 PM  
**To:** Jason McLellan (b) (6)>  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6); Meagan Phelan <[mphelan@aaas.org](mailto:mphelan@aaas.org)>  
**Subject:** RE: Coronavirus research for Science

Dear Jason,

I just this minute sent you the revision package – I hadn't checked e-mail in a while because I was working on this. I also am surprised that it's not up at BioRxiv yet. I don't think any major revisions are called for – in my edits I was aiming at accessibility because I think this will be read by non-experts. If you could give me a sense of how much time you need to revise once you see the reviews and edited manuscript, that will be very helpful. On our end, after acceptance, the manuscript would be promoted to a network of global reporters. We are likely to do this without an embargo, but instead with immediate release. I am copying Meagan Phelan, our Science Press Package Director, who can give further guidance. In terms of preparing for publication, there is the complication of the Monday holiday, so I think it would be difficult for us to plan a roll out before Tuesday. I anticipate that once the paper goes live on bioRxiv you may start getting questions. Feel free to contact Meagan's team for help, basically it is your decision about when to speak to reporters, but we ask that you not mention that the manuscript is at Science before we release it and we'd be grateful if you remind reporters that the bioRxiv version is not peer reviewed.

For now though please let me know your time frame as soon as you can.

Best Regards  
Valda

---

**From:** Jason McLellan (b) (6)  
**Sent:** Friday, February 14, 2020 2:16 PM  
**To:** Valda Vinson <[vvinson@aaas.org](mailto:vvinson@aaas.org)>  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6); Priscilla Kelly <[pkelly@aaas.org](mailto:pkelly@aaas.org)>  
**Subject:** RE: Coronavirus research for Science

Hi Valda,

I was wondering if you had an update on our manuscript. Any information you could provide is greatly appreciated.

I'm still waiting for BioRxiv to publish our manuscript online. I submitted it on Tuesday and it's still not available.

Best regards,  
Jason

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 1 May 2020 14:02:43 +0000  
**To:** Mitchell Warren; Mascola, John (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Cc:** Stacey Hannah  
**Subject:** RE: Vaccine Awareness Day

Hi Mitchell,

Nice to hear from you again. This has felt like 30 years of HIV compressed into 3 months. May 18<sup>th</sup> is indeed the anniversary of the VRC's announcement.

We would be glad to do this. Ideally, we could do it sometime in June when we could have more data to discuss. At the moment we are constrained because the data we have is not public, so all we can show is prior MERS work and philosophy and say how fast we went. That is not too informative any more. We should have a publication out by mid June.

Best wishes,

Barney

---

**From:** Mitchell Warren <mitchell@avac.org>  
**Sent:** Thursday, April 30, 2020 9:10 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6); Mascola, John (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Cc:** Stacey Hannah <Stacey@avac.org>  
**Subject:** Vaccine Awareness Day

Hi, all. I know you are all extraordinarily busy and but wanted to say how excited we are to see the VRC at the forefront in the current craziness. Not surprise at all, but very grateful for your leadership.

It seems like both yesterday and a lifetime ago when John and I were talking at CAVD about planning for AMP results – which we are still doing and look very forward to talking about that soon.

But now writing to see if one or all of you might be available sometime in the weeks ahead to participate in a webinar about COVID vaccine development. We are as usual planning our HIV Vaccine Awareness Day activities (which we always see as the VRC's anniversary) and want the webinar to provide both an update on new vaccines but also highlight the links to the platforms and investments in HIV vaccine development.

Barney, your recent NIH webinar was terrific! We'd love to explore both the broad pipeline of vaccines, timelines, ways to accelerate, etc., as well as an update on the VRC's own work that you and Kizzmekia have talked about.



We are very flexible in terms of day – it need not be on May 18<sup>th</sup> but we'd love to be in the weeks ahead – ideally one morning around 9 or 10 ET. We'd likely schedule for 90 minutes and might include one or two additional presenters, but we want to be sure to secure a time that works for you all first and we can then talk about specifics.

Many thanks in advance and looking very forward,  
Mitchell

---

Mitchell Warren  
Executive Director  
AVAC  
423 West 127th Street, 4th Floor  
New York, NY 10027  
General Phone: +1-212-796-6423  
Direct Phone: +1-646-369-1467  
Mobile: (b) (6)  
E-mail: [mitchell@avac.org](mailto:mitchell@avac.org)  
Internet: [www.avac.org](http://www.avac.org)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 20 Mar 2020 13:42:53 +0000  
**To:** Oplinger, Anne (NIH/NIAID) [E]  
**Cc:** Hiatt, Nissa (NIH/VRC) [C]; NIAID OCGR NSWB  
**Subject:** RE: Just terrific! FB Live for Science Mag on coronavirus, spike protein, vax etc

Thanks Anne. Jason and I work well together.

I have to tell you about the tie because it is (b) (6), and is prophetic. It is actually a Zika tie but looks nothing like a flavivirus and a lot like a coronavirus.

Barney

---

**From:** Oplinger, Anne (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, March 20, 2020 9:38 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** Hiatt, Nissa (NIH/VRC) [C] (b) (6); NIAID OCGR NSWB  
<NIAIDOCGRNSWB@mail.nih.gov>  
**Subject:** Just terrific! FB Live for Science Mag on coronavirus, spike protein, vax etc

Hi Barney,  
Just watched the Science Mag Facebook Live with you and Jason McLellan. It was really excellent. So informative and inspiring. Very cool to see the worldwide reach of the audience—someone was even watching from the Int'l Space Station! I gather it will be kept on the Science page so people who couldn't see it live can watch it later.

I also liked your coronavirus tie!

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 8 Feb 2020 00:29:29 +0000  
**To:** Young, Monique (NIH/VRC) [E]  
**Cc:** Bediako, Hilary; Morabito, Kaitlyn (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]; Loomis, Rebecca (NIH/VRC) [E]; Ruckwardt, Tracy (NIH/VRC) [E]  
**Subject:** Re: Summer research opportunity in infectious diseases

Hi Hilary,

I think that working under Tracy Ruckwardt with Rebecca Loomis on the serology assays needed for the Nipah, measles, and mumps projects would work the best. I've copied them here. Dr. Loomis may be able to share some papers to help you begin thinking about the projects.

Best wishes,

Barney

Sent from my iPhone

On Feb 7, 2020, at 7:05 PM, Young, Monique (NIH/VRC) [E] (b) (6) wrote:

Hi Hilary –

Per our phone call this week, I have sent you information via septate cover to initiate your paperwork for your arrival this summer.

Questions, please let me know.

Thanks...Monique

(b) (6)

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**From:** Bediako, Hilary (b) (6)  
**Sent:** Monday, January 27, 2020 9:55 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6); Young, Monique (NIH/VRC) [E] (b) (6)  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E] (b) (6)  
**Subject:** Re: Summer research opportunity in infectious diseases

Hi dr Graham,

It was great speaking with you last week. Looking forward to joining the lab for the summer!. My summer break is June 15 to Aug 21 so 10 weeks. On the phone we spoke about potential viruses I could work on... you mentioned RSV, influenza, coronavirus, and others. I'm thinking about which one I want to work with. Do you mind sending me some literature so I can get a better idea of what the lab is doing with each of these viruses? Also do you have recommendations on specific project/ projects that would be most productive to work on for a 10 week period? I would love to make the most out of the summer!

Best,

Hilary

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Sent:** Thursday, January 23, 2020 5:44:08 PM  
**To:** Young, Monique (NIH/VRC) [E] (b) (6)>  
**Cc:** Bediako, Hilary <(b) (6)>; Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)>; Bok, Karin (NIH/VRC) [E] (b) (6)  
**Subject:** [External] FW: Summer research opportunity in infectious diseases

Hi Monique,

Hilary Bediako and I spoke about the SIP and agreed that this would be a good fit. Please work with her to complete the necessary paperwork for her to join the lab this summer.

Thanks,

Barney

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**From:** Bediako, Hilary <(b) (6)>  
**Sent:** Wednesday, January 1, 2020 4:31 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Subject:** Summer research opportunity in infectious diseases

Hi Dr. Graham,

Happy New Year!

My name is Hilary Bediako and I'm a MS1 at Penn Med. I recently completed my immunology and microbiology/infectious diseases courses and I really enjoyed them. I have done basic science research in biophysics throughout my undergraduate career at Amherst and was looking forward to trying

translational/clinical research work this summer. Im also very interested in ID as a specialty.

In my immunology and infectious diseases course I particularly enjoyed the viruses section and learning about how vaccines work. I am from the D.C. area and was wondering if you'll be taking summer interns in your laboratory this summer. If not do you know any other colleagues who would be good mentors?

Hope to hear from you soon,

Hilary Bediako  
MS1, Perelman School of Medicine  
University of Pennsylvania

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 6 Mar 2020 18:25:33 +0000  
**To:** Munoz-Rivas, Flor  
**Cc:** Barbara; Robert Chen; Steve Black (b) (6); Ángel (b) (6); Young, Monique (NIH/VRC) [E]  
**Subject:** RE: CEPI-BC Working Group to develop a consensus definition of Disease Enhancement with COVID-19

I'm glad to help. The most reliable times for me are 7am or 8am on either day.

Barney

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**From:** Munoz-Rivas, Flor (b) (6) >  
**Sent:** Thursday, March 5, 2020 6:41 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Cc:** Barbara (b) (6); Robert Chen (b) (6); Steve Black (b) (6); Ángel Honrado <(b) (6)>  
**Subject:** FW: CEPI-BC Working Group to develop a consensus definition of Disease Enhancement with COVID-19

Dear Professor Graham,

I am writing on behalf of the Coalition for Epidemic Preparedness and Innovation (CEPI) and the Brighton Collaboration (BC) to invite you to participate in a project of high priority for the development of vaccines for COVID-19.

This invitation is based on your expertise and the recommendation of our consultants.

Accelerated COVID-19 vaccine development is imminent and a global priority. Enhanced Respiratory Disease after vaccination is a concern.

In this project, we ask that you are part of a **CEPI-BC working group that will develop a Case Definition (Brighton Collaboration format) of Enhanced Respiratory Disease after vaccination for use during the clinical evaluation of vaccines for COVID-19.** Please see the **attached Scope document** for details.

You can also find **additional information regarding CEPI-BC** here:

<http://brightoncollaboration.us/speac/>

A brief introductory TC will be scheduled for March 10 or 11, depending on the availability of members.

WG members will be invited to listen in (unless they are already participating in) a teleconference organized by CEPI-SPEAC to discuss disease enhancement, during March 12 and 13, 2020.

After that conference, the WG will meet to further discuss the scope of work and an outline of the manuscript.

Tasks will be assigned, and a timeline and deadlines will be set.



An anticipated time line is as follows:

- By March 15<sup>th</sup>: Confirm WG membership, participate in introductory TC, participate in ED TC
- Week of March 16-20 – Participate in WG TC to develop scope of work, outline, assignments and timelines
- By April 30<sup>th</sup>: First draft of manuscript
- By May 15<sup>th</sup>: Manuscript draft ready for BC Peer review
- By May 31<sup>st</sup>: Final manuscript for submission for publication

**Please confirm by responding to this email if you will be joining us in this project.**

Also, let me know which of the proposed times below would be convenient for you to join a brief introductory conference call:

**Tuesday March 10<sup>th</sup> :**

6 AM US Central Time, 7 AM US Eastern Time, 12 Noon Central European Time  
7 AM US Central time, 8 AM US Eastern Time, 1 PM Central European Time  
8 AM US Central time, 9 AM US Eastern Time, 2 PM Central European Time  
10 AM US Central time, 11 AM US Eastern Time, 4 PM Central European Time

**Wednesday March 11<sup>th</sup>:**

6 AM US Central Time, 7 AM US Eastern Time, 12 Noon Central European Time  
7 AM US Central time, 8 AM US Eastern Time, 1 PM Central European Time  
8 AM US Central time, 9 AM US Eastern Time, 2 PM Central European Time  
10 AM US Central time, 11 AM US Eastern Time, 4 PM Central European Time

We are looking forward to working with you,

On behalf of CEPI-SPEAC group

Flor Munoz, Barbara Law, Robert Chen and Steve Black

**Flor M. Munoz, MD**

Associate Professor of Pediatrics, Infectious Diseases

Molecular Virology and Microbiology

Baylor College of Medicine

Transplant Infectious Diseases

Texas Children's Hospital

Feigin Tower

1102 Bates St. Suite 1150

Houston, TX 77030

Tel (Direct): (b) (6)

Tel (office): (b) (6)

Fax: 832-825-4347

Email: (b) (6)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 28 Feb 2020 15:55:25 +0000  
**To:** Morabito, Kaitlyn (NIH/VRC) [E]; Bok, Karin (NIH/VRC) [E]; Gall, Jason (NIH/VRC) [C]  
**Cc:** Stein, Judy (NIH/VRC) [C]; Corbett, Kizzmekia (NIH/VRC) [E]; Carlton, Kevin (NIH/VRC) [E]; Stein, Judy (NIH/VRC) [C]  
**Subject:** RE: Call with this Group? FW: (b) (4)

I think this is too preliminary to have a detailed email discussion.

BG

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**From:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >  
**Sent:** Friday, February 28, 2020 10:53 AM  
**To:** Bok, Karin (NIH/VRC) [E] (b) (6); Gall, Jason (NIH/VRC) [C] (b) (6) >  
**Cc:** Stein, Judy (NIH/VRC) [C] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >; Graham, Barney (NIH/VRC) [E] (b) (6); Carlton, Kevin (NIH/VRC) [E] (b) (6) >; Stein, Judy (NIH/VRC) [C] (b) (6) >  
**Subject:** Re: Call with this Group? FW: (b) (4)

Hi Karin,

Can you elaborate on the decision regarding (b) (4), (b) (5)  
(b) (4), (b) (5)  
(b) (4), (b) (5):. I'm including Judy here.

Thanks,  
Kaitlyn

---

**From:** Karin Bok (b) (6) >  
**Date:** Thursday, February 27, 2020 at 5:30 PM  
**To:** Jason Gall (b) (6) >  
**Cc:** Judy Stein (b) (6), "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6) >, Kizzmekia Corbett (b) (6) >, Barney Graham (b) (6) >, "Carlton, Kevin (NIH/VRC) [E]" (b) (6) >  
**Subject:** Re: Call with this Group? FW: (b) (4)

Jason,

Just looping you in again, since VRC leadership decided yesterday that they support (b) (4), (b) (5)  
(b) (4), (b) (5)

Let us know if you want us to engage with this group or not, or what are the plans to get this done, so we can help with anything we can.

Thanks!

Karin.

Karin Bok, MS, PhD

Senior Advisor, Vaccine Development

Office of the Director, Vaccine Research Center

National Institute of Allergy and Infectious Diseases

National Institutes of Health

phone: (b) (6) | mobile: (b) (6) | email: (b) (6)

<https://www.niaid.nih.gov/about/vrc>

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**From:** "Stein, Judy (NIH/VRC) [C]" (b) (6)  
**Date:** Thursday, February 27, 2020 at 3:59 PM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6) "Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6)  
**Cc:** Karin Bok (b) (6) >  
**Subject:** RE: Call with this Group? FW: (b) (4)

Hi everyone,

This started out as a CDA so that we could provide information to (b) (4) that they would then use to get funding from (b) (4).

From what it seems to me, the 'conversation' changed and they are now soliciting direct business from us.

Just FYI, we don't necessarily have a CDA that covers anything other than their original question and no particular obligation if the VRC is not interested.

Thanks

Judy

---

**From:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >  
**Sent:** Thursday, February 27, 2020 3:45 PM  
**To:** Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>; Stein, Judy (NIH/VRC) [C] <(b) (6)>  
**Cc:** Bok, Karin (NIH/VRC) [E] (b) (6)  
**Subject:** Re: Call with this Group? FW: (b) (4)

Hi Kizzmekia,

I think Karin may have talked to Jason about this group, so I'm including her here.

---

**From:** Kizzmekia Corbett (b) (6) >  
**Date:** Thursday, February 27, 2020 at 3:43 PM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" <(b) (6)>, Judy Stein  
(b) (6) >  
**Subject:** Call with this Group? FW: (b) (4)

Per Dr. Graham below, we should move on this... so maybe we should set up a call through Monique?

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive  
Bethesda MD 20892  
Laboratory: (b) (6)  
Personal: (b) (6)  
Fax: (301) 480-2771

---

**From:** Barney Graham (b) (6)  
**Date:** Thursday, February 27, 2020 at 2:57 PM  
**To:** Kizzmekia Corbett (b) (6)  
**Subject:** RE: (b) (4)

I think this came through our inquiry to (b) (4), (b) (5). They asked us to work through this group as a starting point. Getting (b) (5)

BG

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
**Sent:** Thursday, February 27, 2020 2:20 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Subject:** FW: (b) (4)



How are we to answer this? (b) (5), correct?

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center

National Institutes of Allergy and Infectious Diseases

National Institutes of Health

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892

Laboratory: (b) (6)

Personal: (b) (6)

Fax: (301) 480-2771

---

**From:** (b) (4) <(b) (6), (b) (4)>

**Date:** Wednesday, February 26, 2020 at 12:28 PM

**To:** "Stein, Judy (NIH/VRC) [C]" (b) (6)>, Kizzmekia Corbett  
(b) (6)

**Cc:** Kaitlyn Morabito (b) (6)>, "Bok, Karin (NIH/VRC) [E]"

(b) (6)>, "Gall, Jason (NIH/VRC) [C]" (b) (6), (b) (4),  
(b) (6), (b) (4)>, (b) (4) <(b) (6), (b) (4)>, (b) (4),  
(b) (6), (b) (4)>

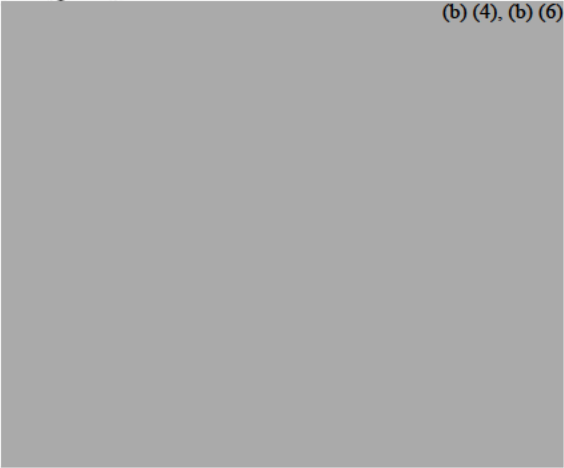
**Subject:** RE: (b) (4)

Kizzmekia, Judy,

We are still awaiting your response as to what is required here. Do you have time for a quick call later this week?

Regards,

(b) (4), (b) (6)



(b) (4)

---

**From:** Stein, Judy (NIH/VRC) [C] (b) (6)  
**Sent:** Thursday, February 13, 2020 2:20 PM  
**To:** (b) (4) <(b) (6), (b) (4)>  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E] (b) (6); Gall, Jason (NIH/VRC) [C] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6); (b) (4) <(b) (6), (b) (4)>; (b) (4) <(b) (6), (b) (4)>; (b) (4) <(b) (6), (b) (4)>  
**Subject:** RE: (b) (4)

Dear (b) (4),  
Kizzmekia Corbett, the lead scientist, will be able to provide you with the answers to your questions.  
Thanks very much.  
Judy  
(b) (6)

---

**From:** (b) (4) (b) (6), (b) (4)  
**Sent:** Thursday, February 13, 2020 2:06 PM  
**To:** Stein, Judy (NIH/VRC) [C] (b) (6)>  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E] (b) (6); Gall, Jason (NIH/VRC) [C] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6); (b) (4) <(b) (6), (b) (4)>; (b) (4) <(b) (6), (b) (4)>  
**Subject:** Re: (b) (4)

Thank you, Judy. Are you seeking a (b) (4)?

A telecom would be very helpful as the next step. What are your availabilities tomorrow or next week (pm EST)?

regards,  
(b) (4)

Please pardon brevity and typos

---

**From:** Stein, Judy (NIH/VRC) [C] (b) (6)  
**Sent:** Thursday, February 13, 2020 1:22:13 PM  
**To:** (b) (4) (b) (6), (b) (4)>  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E] (b) (6); Gall, Jason (NIH/VRC) [C] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E] (b) (6); (b) (6)  
**Subject:** RE: (b) (4)

Dear (b) (4),

I have attached the (b) (4)  
(b) (4)  
(b) (4). Additional details are included below.

Please let us know if you have any questions.

Thanks very much.

Judy

(b) (6)

(b) (4)

---

**From:** (b) (4) <(b) (6), (b) (4)>  
**Sent:** Thursday, February 6, 2020 5:43 PM  
**To:** Stein, Judy (NIH/VRC) [C] (b) (6)  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E]  
(b) (6); Gall, Jason (NIH/VRC) [C] (b) (6)  
**Subject:** RE: (b) (4)

Hi Judy,

Here is the FE doc. We look forward to hearing back about the next steps.

Regards,  
(b) (4)

---

**From:** Stein, Judy (NIH/VRC) [C] (b) (6)>  
**Sent:** Thursday, February 6, 2020 4:18 PM  
**To:** (b) (4) (b) (6), (b) (4)  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E]  
(b) (6); Gall, Jason (NIH/VRC) [C] (b) (6)>  
**Subject:** FW: (b) (4)

Hi (b) (4),

Our tech transfer office changed the language to (b) (4) and they have signed. You can feel free to write or type in the name and title of your signatory, and if you can then sign and return to me, I would appreciate it.

This agreement will then be legally signed and we will follow with Dr. Graham's acknowledgement signature.

Thanks  
Judy

**From:** (b) (4) (b) (6), (b) (4) >  
**Sent:** Thursday, February 6, 2020 2:44 PM  
**To:** Stein, Judy (NIH/VRC) [C] (b) (6) >  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >; Bok, Karin (NIH/VRC) [E] (b) (6) >; Gall, Jason (NIH/VRC) [C] (b) (6)  
**Subject:** RE: (b) (4)

Judy,

PFA CDA draft with our edits tracked for your review.

Regards,

(b) (4), (b) (6)

---

**From:** Stein, Judy (NIH/VRC) [C] (b) (6)  
**Sent:** Thursday, February 6, 2020 8:07 AM  
**To:** (b) (4) (b) (6), (b) (4) >  
**Cc:** (b) (6), (b) (4) >; Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E] (b) (6) >; Gall, Jason (NIH/VRC) [C] (b) (6)  
**Subject:** RE: (b) (4)

Dear Dr. (b) (4)

I have attached a standard NIAID CDA for your review. If this is acceptable, can you please fill in the highlighted section and the signature block, sign and email back to me.

If you would like to request any edits, please send a redline and our tech transfer office will review.

Thanks very much.

Judy

Judy Stein, MBA, MSPH [C]  
Strategic Planning and Development  
Vaccine Research Center, NIAID, NIH  
Tel: (b) (6)

---

**From:** (b) (4) (b) (6), (b) (4)  
**Sent:** Tuesday, February 4, 2020 5:01 PM

**To:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** Mascola, John (NIH/VRC) [E] (b) (6)>; Gall, Jason (NIH/VRC) [C]  
(b) (6) (b) (4) (b) (6), (b) (4) (b) (4)  
(b) (6), (b) (4)> (b) (4) (b) (6), (b) (4)> (b) (4)  
(b) (6), (b) (4)  
**Subject:** RE: (b) (4)

Thanks for the introduction, (b) (4)

Barney, please let me know if you would like to discuss (b) (4)  
(b) (4)  
(b) (4) How may I  
assist?

Regards,  
(b) (4), (b) (6)

---

**From:** (b) (4) (b) (6), (b) (4)>  
**Sent:** Tuesday, February 4, 2020 4:22 PM  
**To:** (b) (4) (b) (6), (b) (4)>; 'Graham, Barney (NIH/VRC) [E]'  
(b) (6)  
**Cc:** 'Mascola, John (NIH/VRC) [E]' (b) (6); 'Gall, Jason (NIH/VRC) [C]'  
(b) (6)> (b) (4) (b) (6), (b) (4)> (b) (4)  
(b) (6), (b) (4); (b) (4) < (b) (6), (b) (4)>  
**Subject:** RE: CHO expression

Thank you for the introduction, (b) (4)

Dear Barney,

Nice to e-meet you!

This is (b) (4) and I am responsible for (b) (4)  
(b) (4)

For NIH/VRC, let me introduce you to my colleague in East Coast, (b) (4), (b) (6) and  
will help you with additional information on our (b) (4)  
(b) (4).



Best,

(b) (4), (b) (6)

---

**From:** (b) (4) (b) (6), (b) (4)>

**Sent:** 04 February 2020 16:42

**To:** 'Graham, Barney (NIH/VRC) [E]' (b) (6)>; (b) (4) (b) (6), (b) (4)

**Cc:** 'Mascola, John (NIH/VRC) [E]' (b) (6); 'Gall, Jason (NIH/VRC) [C]'

(b) (6); (b) (4) (b) (6), (b) (4)

**Subject:** (b) (4)

Dear Barney,

As discussed, for the (b) (4), I am connecting you to (b) (4) for further needful.

Regards,

(b) (4), (b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 21 Apr 2020 17:48:59 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C]  
**Cc:** Prince, Tasheema (NIH/VRC) [C]  
**Subject:** Re: Interview Request: Washington Post  
**Attachments:** image001.png

This is done.

BG

Sent from my iPhone

On Apr 21, 2020, at 9:56 AM, Hiatt, Nissa (NIH/VRC) [C] (b) (6) wrote:

Hi Barney,

I heard from the OCGR News team that noon today works for Carolyn Johnson at the Washington Post for the follow up vaccine development story.

Her contact information is listed below if you need to contact Carolyn.

Carolyn Johnson

Washington Post

202-334-6248 (desk), (b) (6) (cell)

[Carolyn.Johnson@washpost.com](mailto:Carolyn.Johnson@washpost.com)

Best,

Nissa

**Nissa Hiatt**

Communications

Vaccine Research Center, NIAID, NIH

40 Convent Drive, Bldg 40, Room 1100

Bethesda, MD 20892

Cell: (b) (6)

Office: (b) (6)

(b) (6)

<image001.png>

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 10:18 AM  
**To:** Hiatt, Nissa (NIH/VRC) [C] (b) (6)  
**Cc:** Prince, Tasheema (NIH/VRC) [C] (b) (6) >  
**Subject:** RE: Interview Request: Washington Post

Looks like noon tomorrow could work. She could call (b) (6)

BG

---

**From:** Hiatt, Nissa (NIH/VRC) [C] (b) (6)  
**Sent:** Monday, April 20, 2020 10:13 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** Prince, Tasheema (NIH/VRC) [C] (b) (6)  
**Subject:** RE: Interview Request: Washington Post

Hi Barney,

We just heard that this follow up vaccine development interview with Carolyn Johnson at the Washington Post is cleared. I know your schedule is packed. Do you think you'll have time to reach out this week or not until next week? We could let her know when to expect you but it sounds like she knows that you are busy.

As I mentioned, Carolyn also requested a feature profile on Dr. Corbett that the OCGR News Branch is handling.

Best,  
Nissa

**Nissa Hiatt**  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Room 1100  
Bethesda, MD 20892  
Cell: (b) (6)  
Office: (b) (6)  
(b) (6)

<image001.png>

---

**From:** Hiatt, Nissa (NIH/VRC) [C]  
**Sent:** Friday, April 17, 2020 6:51 PM

**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** Prince, Tasheema (NIH/VRC) [C] (b) (6)>  
**Subject:** Re: Interview Request: Washington Post

I'll keep you posted when it is cleared!

Best,  
Nissa

Nissa Hiatt  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Rm 1100  
Bethesda, MD 20892  
Office: (b) (6)  
Mobile: (b) (6)  
(b) (6)

On Apr 17, 2020, at 6:34 PM, Graham, Barney (NIH/VRC) [E] (b) (6)> wrote:

I can do this next week sometime.

Barney

Sent from my iPhone

On Apr 17, 2020, at 3:29 PM, Hiatt, Nissa (NIH/VRC) [C] (b) (6) wrote:

Hi Barney,

Carolyn Johnson with the Washington Post has requested an interview with you for a new story. More information is listed below but it looks like an angle you might be interested in. You spoke with her in early February for this story about mRNA-1273:

<https://www.washingtonpost.com/health/2020/01/30/coronavirus-treatment-vaccine-cure/>.

- a deep dive into vaccine development, getting a closer look at how things play out—normally vs. with Covid. She notes:
  - I talked to Barney Graham very early on about the effort, but we want to find out what's happened in the past two months or so since that conversation!
  - Our goal is to really explain WHY vaccine development takes time, and also the extraordinary measures to speed that up. Not just hours worked, but thinking about flexible/adaptive trial design, clever ways to use real-world evidence, etc.

Please let us know if you are interested and I'll help get it cleared. Carolyn's deadline is end of next week but all deadlines are negotiable.

She was also interested in a profile of Dr. Corbett -I'll send that around to all of you in leadership per the new SOP.

I hope you have a nice weekend,  
Nissa

**Nissa Hiatt**

Communications

Vaccine Research Center, NIAID, NIH

40 Convent Drive, Bldg 40, Room 1100

Bethesda, MD 20892

Cell: (b) (6)

Office: (b) (6)

(b) (6)

<image001.png>





**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 15 Mar 2020 19:48:35 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C]  
**Subject:** Re: Interview for The New Yorker Video

Sure. I'm not available till late in the week or next week.

BG

Sent from my iPhone

On Mar 15, 2020, at 3:42 PM, Hiatt, Nissa (NIH/VRC) [C] (b) (6) wrote:

Hi Barney,  
My apologies for not getting in touch sooner-there was some back and forth over whether this would require additional clearance and it turns out that it does require separate clearance. If Dominique at the New Yorker replies to you before Jen's team has clearance would you please wait to reply to her until we hear from Jen and her team?

Sorry again for the confusion.

Best,

Nissa

Nissa Hiatt  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Rm 1100  
Bethesda, MD 20892  
Office: (b) (6)  
Mobile: (b) (6)  
(b) (6)

On Mar 15, 2020, at 3:34 PM, Graham, Barney (NIH/VRC) [E] (b) (6) wrote:

Thank you for reaching out. Can you tell me how long this would take and whether I need to be in a particular location?

Best wishes,

Barney

Sent from my iPhone

On Mar 11, 2020, at 11:36 AM, Hessert, Dominique <dominique\_hessert@newyorker.com> wrote:

Hi Barney,

My name is Dominique Hessert and I'm a video producer over at The New Yorker magazine. I'm currently looking to create a video illustrating the progression of the coronavirus vaccine, and Carolyn Kormann gave your contact information as someone to reach out to. I'd love to conduct a skype interview with you to talk about this subject - would you be open to this?

If so, just let me know when would be best. Thank you in advance! I look forward to speaking.

Best,

Dominique

--

DOMINIQUE HESSERT

Video Producer

1 World Trade Center, New York NY 10007

O: 212.286.6618

M: (b) (6)

@dominiquehessert

CONDÉ NAST

THE NEW YORKER

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 31 Mar 2020 17:13:49 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]; Morabito, Kaitlyn (NIH/VRC) [E]  
**Subject:** RE: SARS2 (b) (4)

We have already done the (b) (5) Will the (b) (5)?

I'm more interested in the (b) (5).

BG

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Sent:** Tuesday, March 31, 2020 1:09 PM  
**To:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Subject:** Re: SARS2 (b) (4)

I didn't have this in my notes from the call on Friday. Did we agree to this?

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive  
Bethesda MD 20892  
Laboratory: (b) (6)  
Personal: (b) (6)  
Fax: (301) 480-2771

---

**From:** "Martinez, David Rafael" (b) (6) >  
**Date:** Tuesday, March 31, 2020 at 1:07 PM  
**To:** Kizzmekia Corbett (b) (6) >  
**Cc:** Barney Graham (b) (6) Ralph Baric <(b) (6)> Alexandra Schaefer (b) (6), "Leist, Sarah Rebecca" (b) (6) >  
**Subject:** Re: SARS2 (b) (4)

As soon as possible so I can start optimizing the (b) (4)  
?

David

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
**Sent:** Tuesday, March 31, 2020 1:03 PM  
**To:** Martinez, David Rafael (b) (6)  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6); Baric, Ralph S (b) (6)  
Schaefer, Alexandra <(b) (6)>; Leist, Sarah Rebecca (b) (6)>  
**Subject:** Re: SARS2 (b) (4)

When do you need this by? We do not have (b) (5) to spare right now.

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive  
Bethesda MD 20892  
Laboratory: (b) (6)  
Personal: (b) (6)  
Fax: (301) 480-2771

---

**From:** "Martinez, David Rafael" <(b) (6)>  
**Date:** Tuesday, March 31, 2020 at 1:01 PM  
**To:** Kizzmekia Corbett (b) (6)  
**Cc:** Barney Graham (b) (6); Ralph Baric <(b) (6)>, Alexandra  
Schaefer (b) (6); "Leist, Sarah Rebecca" (b) (6)  
**Subject:** SARS2 (b) (4)

Hi Kizzy,

I'm planning on optimizing an (b) (4) that  
you sent us. I'm doing this soon.

Can you please send me (b) (4)  
would be great.

Here's my shipping address:

David Martinez

135 Dauer Drive

3109 Michael Hooker Research Center

CHAPEL HILL, NC 27599

US

Thanks!

David



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 25 Feb 2020 18:50:49 +0000  
**To:** Virginia Dolen  
**Cc:** Cassetti, Cristina (NIH/NIAID) [E]; Morabito, Kaitlyn (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; Young, Monique (NIH/VRC) [E]  
**Subject:** RE: Meet the Expert Roundtable Invitation - NFID 2020 Annual Conference on Vaccinology Research

Yes, it is on my calendar.

Barney

---

**From:** Virginia Dolen <VDolen@nfid.org>  
**Sent:** Tuesday, February 25, 2020 1:16 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Cc:** Cassetti, Cristina (NIH/NIAID) [E] (b) (6)  
**Subject:** RE: Meet the Expert Roundtable Invitation - NFID 2020 Annual Conference on Vaccinology Research

Hello Dr. Graham,

I am writing to confirm if you will be able to co-lead a Meet the Expert roundtable on Vaccine Development for Novel Coronavirus Response at the 2020 ACVR. Please let me know if you will be able to participate in the session, scheduled for Wednesday, March 25 from 7:15–8:15 AM. Thank you!

Kind Regards,  
Virginia

---

**From:** Vaccine  
**Sent:** Thursday, February 13, 2020 9:13 AM  
**To:** 'bgraham@mail.nih.gov' (b) (6) >  
**Cc:** Cassetti, Cristina (NIH/NIAID) [E] (b) (6)  
**Subject:** Meet the Expert Roundtable Invitation - NFID 2020 Annual Conference on Vaccinology Research

Hello,

On behalf of the 2020 ACVR Planning Committee, you are invited to co-lead a **Meet the Expert roundtable** on Vaccine Development for Novel Coronavirus Response on Wednesday, March 25 from 7:15–8:15 AM at the NFID 2020 Annual Conference on Vaccinology Research (ACVR) at the Omni Shoreham Hotel in Washington, DC. Named in honor of one of the founders of NFID, Richard J. Duma, MD, PhD, the Meet the Experts Breakfast Session is conducted in a small group format focused on interaction between attendees and subject matter experts on a variety of topics.

The format, with concurrent roundtables led by subject matter experts, is conducive to informal discussions between 10-12 people. There are no formal remarks requested, and you are not required to submit or prepare any materials in advance. We suggest starting roundtable discussions with brief introductory remarks and introduce your experience/expertise on the discussion topic. Attendees will drive the conversation through their questions. During the session attendees may sit at one table or move around.

Please let me know if you will be able to participate by **February 21**, and we will add the roundtable to the agenda. Don't hesitate to reach out should you have any questions. Thank you!

Kind Regards,  
Virginia

Virginia Dolen, MS  
Associate Director, Professional Education  
National Foundation for Infectious Diseases (NFID)  
7201 Wisconsin Avenue  
Suite 750  
Bethesda, MD 20814  
T: 301.656.0003 x160  
E: [vdolen@nfid.org](mailto:vdolen@nfid.org)  
[www.nfid.org](http://www.nfid.org)



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February 19, 2020

March 23-25, 2020

June 11, 2020

**[Shared Clinical Decision-Making For Immunization Recommendations](#)**

**[2020 Annual Conference on Vaccinology Research, Washington, DC](#)**

**[2020 Awards Dinner, Washington, DC](#)**

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 22:14:39 +0000  
**To:** Routh, Jennifer (NIH/NIAID) [E]; Oplinger, Anne (NIH/NIAID) [E]; Hiatt, Nissa (NIH/VRC) [C]  
**Cc:** Stover, Kathy (NIH/NIAID) [E]; Billet, Courtney (NIH/NIAID) [E]; Folkers, Greg (NIH/NIAID) [E]  
**Subject:** RE: finding animal models for coronavirus study

I was thinking these answers in red, especially the last bullet.

BG

Reporter: Eric Boodman

Organization: STAT

Phone #(s): (b) (6) [eric.boodman@globe.com](mailto:eric.boodman@globe.com)

Subject: Coronavirus, animal model used in testing Moderna candidate vaccine

1. My understanding is that wild type mice are not susceptible to Covid-19 virus. What has been modified in the mice that will be used in the next in vivo step to make them susceptible to the virus?

(b) (5)

- 2) Do those mice exist already and to what extent do we know how susceptible they are to the virus and what sorts of disease they show?

(b) (5)

- 3) When will those optimized challenge models be ready?

(b) (5)

- 4) Will there be efficacy results from testing mRNA-1273 in optimized challenge models before clinical testing begins in April, as Dr. Fauci has stated it will?

(b) (5)

Eric's piece on animal models from today: <https://www.statnews.com/2020/03/05/coronavirus-labs-scramble-to-find-right-animals-for-covid-19-studies/>

---

**From:** Routh, Jennifer (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, March 9, 2020 3:26 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)>; Oplinger, Anne (NIH/NIAID) [E] (b) (6)>; Hiatt, Nissa (NIH/VRC) [C] (b) (6)  
**Cc:** Stover, Kathy (NIH/NIAID) [E] (b) (6); Billet, Courtney (NIH/NIAID) [E] (b) (6); Folkers, Greg (NIH/NIAID) [E] (b) (6)  
**Subject:** RE: finding animal models for coronavirus study

We cannot use the one-pager to respond to reporters. We usually do not send reporters our talking points – we set up interviews or we respond to questions as they come. Would you like OCGR to draft a response to this reporter's question based on the one-pager you sent and based on our responses to Julie at Reuters?

Jennifer Routh [E]  
News and Science Writing Branch  
Office of Communications and Government Relations  
National Institute of Allergy and Infectious Diseases (NIAID)  
NIH/HHS  
31 Center Drive Room 7A17C  
Bethesda, MD 20892  
Direct: (b) (6)  
(b) (6)

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---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Sent:** Monday, March 9, 2020 3:20 PM  
**To:** Oplinger, Anne (NIH/NIAID) [E] <(b) (6)>; Routh, Jennifer (NIH/NIAID) [E] (b) (6)>; Hiatt, Nissa (NIH/VRC) [C] (b) (6)  
**Subject:** RE: finding animal models for coronavirus study

He's fishing for something on vaccine-enhanced disease. Could you send him the set of answers I returned last night? I think that covers it.

Barney

---

**From:** Oplinger, Anne (NIH/NIAID) [E] (b) (6)>  
**Sent:** Monday, March 9, 2020 3:02 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6); Routh, Jennifer (NIH/NIAID) [E] (b) (6)>; Hiatt, Nissa (NIH/VRC) [C] <(b) (6)>  
**Subject:** RE: finding animal models for coronavirus study

Hi Barney,



Gorman also wrote to NIH OD Comms earlier today asking about what animals had been used to test the candidate vaccine. We replied with this note: **To date, the NIAID Vaccine Research Center has used wild-type mice to test the immunogenicity of the Moderna experimental mRNA coronavirus vaccine. The next in vivo step will be to test in mouse models that closely mimic human infection (optimized challenge models.)**

He then wrote back to ask if that meant that the vaccine was *\*safety\** tested in mice. In other words, are safety data collected in addition to immunogenicity data in those mouse studies? How should I reply?

Also, do you have interest/time to do an interview with him today or tomorrow? Or would you like me to decline for you at this time? (Maybe leave the door open to talk in future?)

Anne A. Oplinger  
NIAID Office of Communications  
Media Line: 301-402-1663  
General Line: (b) (6) 1  
(b) (6)

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Sent:** Monday, March 9, 2020 2:56 PM  
**To:** Routh, Jennifer (NIH/NIAID) [E] (b) (6)>; Oplinger, Anne (NIH/NIAID) [E] (b) (6)>; Hiatt, Nissa (NIH/VRC) [C] (b) (6)>  
**Subject:** FW: finding animal models for coronavirus study

FYI. If I have already sent this, forgive me.

Barney

**From:** Gorman, James <[jmg@nytimes.com](mailto:jmg@nytimes.com)>  
**Sent:** Friday, March 6, 2020 4:16 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Subject:** finding animal models for coronavirus study

Hi Dr. Graham,

I'm a science reporter with the New York Times. I'm working on a story on how researchers find animal models for a new disease like COVID-19. Would you be available for a conversation Monday or Tuesday on what the challenges are and what some of the options are?

Hope to hear from you.

Best,

Jim Gorman



--  
James Gorman

(b) (6)

jmg@nytimes.com

@jimgorman

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 24 Jan 2020 14:47:26 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]; Morabito, Kaitlyn (NIH/VRC) [E]; Hiatt, Nissa (NIH/VRC) [C]; Bok, Karin (NIH/VRC) [E]; Mascola, John (NIH/VRC) [E]  
**Cc:** Prince, Tasheema (NIH/VRC) [C]; Harris, Christina (NIH/NIAID) [E]; Daucher, Marybeth (NIH/NIAID) [E]  
**Subject:** RE: Wuhan CoV response

Sounds good to me.

BG

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>  
**Sent:** Friday, January 24, 2020 9:34 AM  
**To:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6); Hiatt, Nissa (NIH/VRC) [C] (b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6); Bok, Karin (NIH/VRC) [E] (b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6)  
**Cc:** Prince, Tasheema (NIH/VRC) [C] (b) (6)>; Harris, Christina (NIH/NIAID) [E] (b) (6)>; Daucher, Marybeth (NIH/NIAID) [E] (b) (6)>  
**Subject:** Re: Wuhan CoV response

We could just make the sentence short and sweet...

AbCellera has partnered with researchers at the [Vaccine Research Center](#), at the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health and other leading researchers in the field, who will test antibody candidates for therapeutic potency against the 2019-nCoV.

(b) (5)

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow**

National Institutes of Health

National Institutes of Allergy and Infectious Diseases

Vaccine Research Center

Viral Pathogenesis Laboratory

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892

Laboratory: (b) (6)

Personal: (b) (6)

Fax: (301) 480-2771

---

**From:** Kaitlyn Morabito (b) (6) >  
**Date:** Friday, January 24, 2020 at 8:29 AM  
**To:** "Hiatt, Nissa (NIH/VRC) [C]" (b) (6) >, Barney Graham  
(b) (6), "Bok, Karin (NIH/VRC) [E]" <(b) (6)>, Kizzmekia Corbett  
(b) (6) >, "Mascola, John (NIH/VRC) [E]" (b) (6)  
**Cc:** "Prince, Tasheema (NIH/VRC) [C]" (b) (6), "Harris, Christina  
(NIH/NIAID) [E]" (b) (6) >, "Daucher, Marybeth (NIH/NIAID) [E]"  
(b) (6)  
**Subject:** Re: Wuhan CoV response

Hi Nissa,

I'm concerned that (b) (5)  
(b) (5) I've highlighted the area that I'm concerned about. I'm not sure  
how best to edit it.

We currently have an RCA with them (b) (5), (b) (4)

Thanks,  
Kaitlyn

---

**From:** "Hiatt, Nissa (NIH/VRC) [C]" (b) (6)  
**Date:** Thursday, January 23, 2020 at 8:13 PM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6) >, Barney Graham  
(b) (6) >, Karin Bok (b) (6), Kizzmekia Corbett  
(b) (6) >, John Mascola (b) (6) >  
**Cc:** "Prince, Tasheema (NIH/VRC) [C]" (b) (6) >, "Harris, Christina  
(NIH/NIAID) [E]" (b) (6) >, Marybeth Daucher (b) (6)  
**Subject:** Fwd: Wuhan CoV response

Hi Kaitlyn,

If your group is alright with the language included in the VRC version of the attached release, we can  
move it forward with VRC leadership and the NIAID news team.

Are there any additional details about the collaboration that reviewers should be aware of?

Best,  
Nissa

Sent from my iPhone

Begin forwarded message:

**From:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6)  
**Date:** January 23, 2020 at 5:46:59 PM EST  
**To:** Payal Sipahimalani (b) (6)>, "Graham, Barney (NIH/VRC) [E]" (b) (6)  
**Cc:** Ester Falconer (b) (6)>, "Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6)>, Alexandra Weirich <(b) (6)>, "Hiatt, Nissa (NIH/VRC) [C]" (b) (6)>, "Prince, Tasheema (NIH/VRC) [C]" (b) (6)>, "Bok, Karin (NIH/VRC) [E]" <(b) (6)>  
**Subject: Re: Wuhan CoV response**

Hi Payal,

I'm including the VRC communications team who can help us with the process needed for a press release.

Best,  
Kaitlyn

---

**From:** Payal Sipahimalani (b) (6)>  
**Date:** Thursday, January 23, 2020 at 5:45 PM  
**To:** Barney Graham (b) (6)>  
**Cc:** Ester Falconer (b) (6)>, "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6)>, Kizzmekia Corbett <(b) (6)>, Alexandra Weirich <(b) (6)>  
**Subject:** Re: Wuhan CoV response

Hello again Barney,

In an effort to expedite the review of a press release, I have attached 2 versions of the document. Our preference, if you are amenable and we're able to get approval by Friday, is to use the version that acknowledges the VRC specifically (2020-01-22 Wuhan coronavirus PR\_VRC.docx). The other document is the one that we'd submit to DARPA tomorrow, in the absence of VRC approval.

We'll stand by for any comments, concerns or questions, and hope to hear from you soon.

Thank you,  
Payal.

On Thu, Jan 23, 2020 at 12:21 PM Payal Sipahimalani (b) (6)> wrote:  
Hello Barney,

We've been fielding a few questions about whether and how AbCellera is responding to the Wuhan nCoV outbreak and would like to issue a press release, in the next day or two, to address this.

We'd like to acknowledge the VRC in this, but are cognisant of the review and oversight required before any public announcements. My questions to you are first, would you like to be included in any press

release we issue? And second, if we were able to get a draft to you before the close of business today, would we be able to get it through all the appropriate reviewers at the VRC/NIH by tomorrow (Friday)?

Thank you,  
Payal.

On Tue, Jan 21, 2020 at 3:47 PM Graham, Barney (NIH/VRC) [E] (b) (6) wrote:  
Thanks. We look forward to working on the project together.

Barney

Sent from my iPhone

On Jan 21, 2020, at 3:34 PM, Payal Sipahimalani (b) (6) > wrote:

Hello all,

After a brief conversation with Amy Jenkins and others at DARPA, we are going ahead with the Wuhan antibody discovery campaign. Here's a summary of our call and next steps:

- The first US case, in Washington state, was just announced by the CDC

(b) (4)

We'll start to draft a more detailed study plan, and I'm sure we'll be in close contact over the next few weeks, but we understand that Amy will be at the VRC on Friday so wanted to let you know that she's been apprised of all of this, in case that facilitates your discussion with her.



Thank you, and good luck to us all!  
Payal.

--

Payal Sipahimalani, MSc, PMP  
Senior Project Manager  
AbCellera Biologics Inc.

2215 Yukon Street

Vancouver BC V5Y 0A1

T: (b) (6)

M: (b) (6)

(b) (6)

--

Payal Sipahimalani, MSc, PMP  
Senior Project Manager  
AbCellera Biologics Inc.

2215 Yukon Street

Vancouver BC V5Y 0A1

T: (b) (6)

M: (b) (6)

(b) (6)

--

Payal Sipahimalani, MSc, PMP  
Senior Project Manager  
AbCellera Biologics Inc.

2215 Yukon Street

Vancouver BC V5Y 0A1

T: (b) (6)

M: (b) (6)

(b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 24 Mar 2020 21:24:52 +0000  
**To:** Harris, Christina (NIH/NIAID) [E]  
**Subject:** Accepted: COVID-19 Daily Check-in

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 25 Apr 2020 22:30:52 +0000  
**To:** Mascola, John (NIH/VRC) [E]  
**Subject:** Re: Figure 1.pptx

I spent almost the whole day editing a document from CEPI/Brighton Collaboration on (b) (5)  
(b) (5)

BG

Sent from my iPhone

On Apr 25, 2020, at 6:05 PM, Graham, Barney (NIH/VRC) [E] (b) (6) > wrote:

I'm working with Gemma Alderton. I think Jon Cohen may have recommended to them that they invite me.

Barney

Sent from my iPhone

On Apr 25, 2020, at 5:40 PM, Mascola, John (NIH/VRC) [E] <(b) (6)> wrote:

Barney,

For NEJM perspective with Tony - they say too many COVID perspective – so thinking of going to Science or Nature.

Are you working with Priscilla Kelly or someone else?

Thanks,  
John

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Sent:** Friday, April 24, 2020 8:39 PM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6) >  
**Subject:** Re: Figure 1.pptx

I'm sending back revisions this weekend. They seem to be in a hurry.

BG

Sent from my iPhone

On Apr 24, 2020, at 5:06 PM, Mascola, John (NIH/VRC) [E] (b) (6) > wrote:

Do you know when in press? We could cite this in NEJM perspective.

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)

**Sent:** Friday, April 24, 2020 3:41 PM

**To:** Mascola, John (NIH/VRC) [E] (b) (6); Gall, Jason (NIH/VRC) [C]  
(b) (6) >; Ledgerwood, Julie (NIH/NIAID) [E] (b) (6) >

**Cc:** Bok, Karin (NIH/VRC) [E] (b) (6); Corbett, Kizzmekia (NIH/VRC) [E]  
(b) (6) >; Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >; Ruckwardt,  
Tracy (NIH/VRC) [E] (b) (6); Kanekiyo, Masaru (NIH/VRC) [E]  
(b) (6)

**Subject:** Figure 1.pptx

I've been asked to add a figure to my brief perspective on the benefits and risks of going fast with vaccine development. Is this too dense with too much jargon to be helpful or do you think people can decipher what I mean?

Thanks,

Barney

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 5 Apr 2020 20:56:16 +0000  
**To:** Todd, John-Paul (NIH/VRC) [E]  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** Re: "shoot"

Thanks JP. Very helpful.

BG

Sent from my iPhone

> On Apr 5, 2020, at 2:38 PM, Todd, John-Paul (NIH/VRC) [E] (b) (6) wrote:  
>  
> Here are updated (b) (5). Please modify as necessary and  
let me know how you want to proceed.  
>  
>  
>  
> -----Original Message-----  
> From: Graham, Barney (NIH/VRC) [E] <(b) (6)>  
> Sent: Sunday, April 5, 2020 1:06 PM  
> To: Todd, John-Paul (NIH/VRC) [E] <(b) (6)>  
> Cc: Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
> Subject: Re: "shoot"  
>  
> In my opinion for this (b) (5)  
(b) (5)  
>  
> Barney  
>  
>  
>  
> Sent from my iPhone  
>  
>> On Apr 5, 2020, at 1:00 PM, Todd, John-Paul (NIH/VRC) [E] (b) (6) wrote:  
>>  
>> I've attached the MSS for what we can do with (b) (5)  
(b) (5)  
>>  
>> (b) (5)  
(b) (5)  
>>  
>> (b) (5)  
(b) (5) Can we chat on the phone about this?  
>>  
>> We would also need a VVC amendment to add the (b) (5), if we decide to do this...  
>>



>>  
>>  
>> -----Original Message-----  
>> From: Graham, Barney (NIH/VRC) [E] (b) (6)  
>> Sent: Sunday, April 5, 2020 11:27 AM  
>> To: Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
>> Cc: Todd, John-Paul (NIH/VRC) [E] (b) (6)>  
>> Subject: Re: "shoot"  
>>  
>> If we start this week, (b) (5)  
(b) (5).  
>>  
>> BG  
>>  
>>  
>>  
>>  
>>  
>>  
>>>> On Apr 5, 2020, at 10:56 AM, Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)> wrote:  
>>>  
>>> --  
>> <857.1 - MSS - Coronavirus Vaccine Study - 040520.doc>  
> <857.1 Groups - 040520.xlsx>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 19 Mar 2020 08:05:37 +0000  
**To:** Boritz, Eli (NIH/NIAID) [E]  
**Cc:** Mascola, John (NIH/VRC) [E]; Koup, Richard (NIH/VRC) [E]; Adrian McDermott; Seder, Robert (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; Kanekiyo, Masaru (NIH/VRC) [E]; Ruckwardt, Tracy (NIH/VRC) [E]; Douek, Daniel (NIH/VRC) [E]  
**Subject:** Re: Influenza lethality prediction draft and original Cell paper

Thanks Eli. [REDACTED] (b) (5)

BG

Sent from my iPhone

On Mar 18, 2020, at 11:44 PM, Boritz, Eli (NIH/NIAID) [E] <[REDACTED] (b) (6)> wrote:

Amateur thoughts from an HIV guy who does ID. . .there is a lot to try to integrate here. [REDACTED] (b) (5)

(b) (5)

Eli

---

**From:** "Mascola, John (NIH/VRC) [E]" [REDACTED] (b) (6) >  
**Date:** Wednesday, March 18, 2020 at 9:14 PM  
**To:** "Graham, Barney (NIH/VRC) [E]" [REDACTED] (b) (6), "Koup, Richard (NIH/VRC) [E]" [REDACTED] (b) (6) >, Adrian McDermott [REDACTED] (b) (6) "Seder, Robert (NIH/VRC) [E]" [REDACTED] (b) (6) >

**Cc:** "Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6)>, "Kanekiyo, Masaru (NIH/VRC) [E]" (b) (6)>, "Ruckwardt, Tracy (NIH/VRC) [E]" (b) (6)>, "Douek, Daniel (NIH/VRC) [E]" <(b) (6)>, "Koup, Richard (NIH/VRC) [E]" (b) (6), "Boritz, Eli (NIH/NIAID) [E]" (b) (6)

**Subject:** RE: Influenza lethality prediction draft and original Cell paper

Adding Danny, and Eli and Rick.

---

**From:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Sent:** Wednesday, March 18, 2020 8:01 PM  
**To:** Koup, Richard (NIH/VRC) [E] (b) (6); Adrian McDermott (b) (6); Seder, Robert (NIH/VRC) [E] (b) (6)>  
**Cc:** Mascola, John (NIH/VRC) [E] (b) (6) Corbett, Kizzmekia (NIH/VRC) [E] (b) (6); Kanekiyo, Masaru (NIH/VRC) [E] (b) (6)>; Ruckwardt, Tracy (NIH/VRC) [E] (b) (6)  
**Subject:** Fwd: Influenza lethality prediction draft and original Cell paper

FYI. From Ron Germain. Anything here we should be thinking of?

The (b) (4)

BG

Sent from my iPhone

Begin forwarded message:

**From:** "Germain, Ronald (NIH/NIAID) [E]" (b) (6)>  
**Date:** March 18, 2020 at 11:16:56 AM EDT  
**To:** "Feldmann, Heinrich (NIH/NIAID) [E]" (b) (6)>, "De wit, Emmie (NIH/NIAID) [E]" <(b) (6)>, "Graham, Barney (NIH/VRC) [E]" <(b) (6)>  
**Subject:** FW: Influenza lethality prediction draft and original Cell paper

Heinz, Emmie, and Barney

I am forwarding some material from the lab that may of interest in the current situation. (b) (5)  
(b) (5)

I don't know if any of this information is actionable or relevant to your efforts, but Steve H. suggested I let you know about it just in case. I would be happy to discuss what we have done, the model systems, etc. if you need/want any more info. Otherwise, keep up the great work you are all doing.

Ron

Ronald N. Germain, M.D., Ph. D.

NIH Distinguished Investigator

Chief, Laboratory of Immune System Biology (LISB)

Chief, Lymphocyte Biology Section, LISB

Director, Center for Advanced Tissue Imaging (CAT-I)

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FAX: 301-480-1660

e mail (b) (6)

URL: <http://www.niaid.nih.gov/lab-sections/3171>

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**From:** Ronald Germain (b) (6)

**Date:** Wednesday, February 19, 2020 at 4:19 PM

**To:** Hugh Auchincloss (b) (6) >

**Subject:** Influenza lethality prediction draft and original Cell paper

Hugh

Per our discussion.

Ron

Ronald N. Germain, M.D., Ph. D.  
NIH Distinguished Investigator  
Chief, Laboratory of Immune System Biology (LISB)  
Chief, Lymphocyte Biology Section, LBS  
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e mail: (b) (6)

<https://www.niaid.nih.gov/research/ronald-n-germain-md-phd>

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 11 Apr 2020 17:25:40 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: mRNA-1273 Data Compiled - FOR YOUR REVIEW  
**Attachments:** (b) (5), (b) (4) BG.docx

Hi Kizzy,

I've edited the figure legends.

The graphs are pasted images so I can't edit.

Comments

(b) (5)

Let me know if there are questions. If you send me back two separate files, (b) (5) I will review again and send to Andrea.

The only thing I have for the (b) (5) the excel file. Is that right?

BG

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >  
**Sent:** Thursday, April 9, 2020 9:23 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Subject:** mRNA-1273 Data Compiled - FOR YOUR REVIEW

Dr. Graham,  
Attached are the data. The figure captions are at the end of the word document. Can you track your changes so I can see how you would do it, please?

Thanks,

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892

Laboratory: (b) (6)

Personal: (b) (6)

Fax: (301) 480-2771

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 5 Feb 2020 14:47:31 +0000  
**To:** Young, Monique (NIH/VRC) [E]  
**Subject:** Fwd: REMINDER: Nido2020 >>>> FW: Submit your abstract before February 28th

FYI. This is the May 11 trip. Kizzy is right that the hotel rooms will be in short supply at this venue in the Netherlands. We should arrange early.

BG

Sent from my iPhone

Begin forwarded message:

**From:** "Corbett, Kizzmekia (NIH/VRC) [E]" <(b) (6)>  
**Date:** February 5, 2020 at 9:41:54 AM EST  
**To:** "Graham, Barney (NIH/VRC) [E]" <(b) (6)>, "Morabito, Kaitlyn (NIH/VRC) [E]" <(b) (6)>, "Corbett, Kizzmekia (NIH/VRC) [E]" <(b) (6)>, "Wang, Lingshu (NIH/VRC) [E]" <(b) (6)>, "Kong, Wing-Pui (NIH/VRC) [E]" <(b) (6)>, "Shi, Wei (NIH/VRC) [E]" <(b) (6)>, "Abiona, Olubukola (NIH/VRC) [F]" <(b) (6)>, "Ziwawo, Cynthia (NIH/VRC) [F]" <(b) (6)>, "Hutchinson, Geoffrey (NIH/VRC) [F]" <(b) (6)>, "Liu, Catherine (NIH/VRC) [C]" <(b) (6)>  
**Subject: REMINDER: Nido2020 >>>> FW: Submit your abstract before February 28th**

Hi all,

If you are **planning to submit an abstract**, I'd be free to review it this weekend **\*wink\***. Also, we should likely start booking hotels as I'm sure this meeting will be packed to capacity.

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center

National Institutes of Allergy and Infectious Diseases

National Institutes of Health

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Laboratory: (b) (6)

Personal: (b) (6)

Fax: (301) 480-2771

---

**From:** Astrid Smarius <a.smarius@congresscompany.com>

**Date:** Wednesday, February 5, 2020 at 9:35 AM

**Subject:** Submit your abstract before February 28th



Dear All,

You all are aware of the outbreak with the novel coronavirus, which has been declared by WHO as a public health emergency of international concern. Our deep sympathies are with the Chinese people and our scientific friends who are foremost affected by the current outbreak and its associated societal restrictions and we sincerely hope that the epidemic can be contained quickly.

We also hope that the NIDO2020 symposium can be held as planned and will obviously call attention to this new nidovirus that emerged in the human population. Please be advised to [register](#) and [book the hotel](#) in time to ensure your place. In case of problems, payments can be reimbursed, minus EUR 50,- administration costs, when the cancellation is done before 27 April 2020.

The NIDO2020 abstract deadline is approaching fast; be sure to **submit your abstract February 28th** at the latest.

If you think some people that may want to come to the meeting are not yet receiving updates, please forward this message to them and have them email Astrid Smarius ([nido2020@congresscompany.com](mailto:nido2020@congresscompany.com)) so they can be placed on the mailing list. In addition, we kindly ask you to re-tweet our @NIDO20201 Twitter messages.

All the best, and we are very much looking forward seeing you in Egmond aan Zee in May.  
Berend-Jan Bosch, Bart Haagmans and Marjolein Kikkert



*XV<sup>th</sup> International Nidovirus symposium*  
*May 10-14, 2020 - Egmond aan Zee - The Netherlands*  
*Meeting website: [www.nido2020.com](http://www.nido2020.com)*

If you have any queries about this symposium, please contact our conference organizer Astrid Smarius from Congress Company via e-mail [nido2020@congresscompany.com](mailto:nido2020@congresscompany.com)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 12 Feb 2020 11:48:40 +0000  
**To:** Xavier Saelens; Corbett, Kizzmekia (NIH/VRC) [E]  
**Cc:** Jason McLellan  
**Subject:** RE: (b) (4) and update here

Hi Xavier,

The (b) (4)  
(b) (4). We will let you know as soon as we can.

Barney

---

**From:** Xavier Saelens (b) (6)  
**Sent:** Wednesday, February 12, 2020 6:35 AM  
**To:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6) Jason McLellan  
(b) (6)  
**Subject:** (b) (4) and update here

Dear Kizzmekia,

The (b) (4) is not yet conclusive, I suppose. Thanks in advance for any update on this that you may have.

The (b) (4)  
(b) (4). We plan to (b) (4)  
(b) (4). We propose (b) (4)  
(b) (4)

(b) (4)

Kind regards,  
Xavier

—  
**Prof. Dr. Xavier Saelens** - Principal Investigator

**VIB-UGent Center for Medical Biotechnology**



Technologiepark-Zwijnaarde 71 - 9052 Gent - Belgium

Tel: (b) (6)

(b) (6)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 7 Apr 2020 19:55:03 +0000  
**To:** (b) (6)  
**Subject:** Fwd: Our influenza review  
**Attachments:** Wei et al., Influenza Vaccines Review Nature Rev. 2020.pdf, ATT00001.htm

Hi Michelle,

In case you haven't already downloaded this, here is a copy of the influenza review.

Hope you are well and weathering the storm.

Barney

Sent from my iPhone

Begin forwarded message:

**From:** "Nabel, Gary /US" <(b) (6)>  
**Date:** April 7, 2020 at 3:32:59 PM EDT  
**To:** "Mascola, John (NIH/VRC) [E]" (b) (6), "Graham, Barney (NIH/VRC) [E]" (b) (6), "Shiver, John /US" (b) (6)>  
**Cc:** "Wei, Chih-Jen /US" (b) (6)>  
**Subject:** Our influenza review

Hi All,

After all your work, I wanted to share a copy of our influenza review that was just published this month in Nature Reviews. It has all of the corrections we discussed and is now available on line.

Thanks again for your effort. Barney, perhaps your office could forward it to Michelle as well?

The urgency of influenza has receded from everyone's memory during our challenge with COVID, but I expect it will one day again be considered a priority. Hope this will help the cause...

Best

Gary

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 18 Apr 2020 15:23:50 +0000  
**To:** Daucher, Marybeth (NIH/NIAID) [E]  
**Subject:** RE: Lead NIH coronavirus researcher suggested pandemic could be 'genocide', said doctors would let blacks die | Fox News

(b) (6)

Barney

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**From:** Daucher, Marybeth (NIH/NIAID) [E] (b) (6)>  
**Sent:** Saturday, April 18, 2020 11:19 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Subject:** FW: Lead NIH coronavirus researcher suggested pandemic could be 'genocide', said doctors would let blacks die | Fox News

Hi Barney,

(b) (5)

Let me know.  
Best,  
MB

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Sent:** Saturday, April 18, 2020 11:10 AM  
**To:** Koup, Richard (NIH/VRC) [E] (b) (6); Mascola, John (NIH/VRC) [E] (b) (6)>  
**Cc:** Harris, Christina (NIH/NIAID) [E] (b) (6)>; Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)>; Hiatt, Nissa (NIH/VRC) [C] (b) (6)>; Prince, Tasheema (NIH/VRC) [C] (b) (6)>; Daucher, Marybeth (NIH/NIAID) [E] (b) (6)  
**Subject:** RE: Lead NIH coronavirus researcher suggested pandemic could be 'genocide', said doctors would let blacks die | Fox News

(b) (5)

Barney

---

**From:** Koup, Richard (NIH/VRC) [E] (b) (6)  
**Sent:** Saturday, April 18, 2020 11:03 AM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6)>  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6)>; Harris, Christina (NIH/NIAID) [E] (b) (6); Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)>; Hiatt, Nissa (NIH/VRC) [C] (b) (6); Prince, Tasheema (NIH/VRC) [C] <(b) (6)>; Daucher, Marybeth (NIH/NIAID) [E] (b) (6)>  
**Subject:** Re: Lead NIH coronavirus researcher suggested pandemic could be 'genocide', said doctors would let blacks die | Fox News

Agreed. Has Kizzmekia been given specific instructions?

Rick

Sent from my iPhone

On Apr 18, 2020, at 9:29 AM, Mascola, John (NIH/VRC) [E] (b) (6)> wrote:

All,  
Please make sure close communication among this group – so we don't get disjointed information.  
That means if someone gets emails on this or related topic, please inform.

Thanks,

John

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Sent:** Saturday, April 18, 2020 9:26 AM  
**To:** Harris, Christina (NIH/NIAID) [E] (b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6); Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)>; Koup, Richard (NIH/VRC) [E] (b) (6)>  
**Cc:** Hiatt, Nissa (NIH/VRC) [C] (b) (6)>; Prince, Tasheema (NIH/VRC) [C] (b) (6)>; Daucher, Marybeth (NIH/NIAID) [E] (b) (6)  
**Subject:** RE: Lead NIH coronavirus researcher suggested pandemic could be 'genocide', said doctors would let blacks die | Fox News

Thanks. I saw this last night and already have journalist inquiries. Will send to Nissa and OCGR.

Barney

---

**From:** Harris, Christina (NIH/NIAID) [E] <(b) (6)>  
**Sent:** Saturday, April 18, 2020 9:22 AM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6)>; Graham, Barney (NIH/VRC) [E]

(b) (6); Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)>; Koup, Richard (NIH/VRC) [E] (b) (6)  
**Cc:** Hiatt, Nissa (NIH/VRC) [C] (b) (6)>; Prince, Tasheema (NIH/VRC) [C] (b) (6)>; Daucher, Marybeth (NIH/NIAID) [E] (b) (6)>  
**Subject:** Fwd: Lead NIH coronavirus researcher suggested pandemic could be 'genocide', said doctors would let blacks die | Fox News

Thanks, Nissa. Forwarding this to VRC Leadership for awareness.

---

**From:** "Hiatt, Nissa (NIH/VRC) [C]" (b) (6)  
**Date:** Saturday, April 18, 2020 at 8:00:31 AM  
**To:** "Harris, Christina (NIH/NIAID) [E]" (b) (6) "Prince, Tasheema (NIH/VRC) [C]" (b) (6)>  
**Subject:** Lead NIH coronavirus researcher suggested pandemic could be 'genocide', said doctors would let blacks die | Fox News

Good morning,

I just wanted to make y'all aware of this story.

Best,  
Nissa

<https://www.foxnews.com/politics/coronavirus-researcher-pandemic-genocide-blacks-nih>

Nissa Hiatt  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Rm 1100  
Bethesda, MD 20892  
Office: (b) (6)  
Mobile: (b) (6)  
(b) (6)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 12 Mar 2020 02:03:44 +0000  
**To:** Neuzil, Kathleen;Roberts, Chris (NIH/NIAID) [E];Ashley Miller;Andrews, Charla (NIH/NIAID) [C];Arega, Janice (NIH/NIAID) [E];Barbara A. Carste;Beigel, John (NIH) [E];Hoang, Binh (NIH/NIAID) [E];Cassandra Karcs;corona;Harrington, Crystal (NIH/NIAID) [E];Sindall, Elisa (NIH/NIAID) [E];Elsafy, Mohamed (NIH/NIAID) [C];Kenny, Frank (NIH/NIAID) [E];Chun, Guinevere (NIH/NIAID) [E];Gill, Ranjodh (NIH/NIAID) [E];Bennett Hamilton;Hill, Heather;Jim Albert;Khan, Ahsen (NIH/NIAID) [C];Koo, Hyung (NIH/NIAID) [E];Ledgerwood, Julie (NIH/NIAID) [E];Lee, Marina (NIH/NIAID) [E];Linda McNeil;Lisa A. Jackson;Makhene, Mamodikoe (NIH/NIAID) [E];Mat Makowski;Maya Dunstan;Morabito, Kaitlyn (NIH/VRC) [E];Nayak, Seema (NIH/NIAID) [E];Ormanoski, Kathy (NIH/NIAID) [E];Pikaart-Tautges, Rhonda (NIH/NIAID) [E];Rhea Coler;Kim, Sonnie (NIH/NIAID) [E];Veronica Faughnan;Buchanan, Wendy (NIH/NIAID) [E];Schuster, Claire (NIH/NIAID) [E];NIAID BUGS  
**Subject:** RE: Crisis Communication and trial questions

So far we have (b) (4)  
(b) (4)  
(b) (4) We are setting up  
(b) (4) However, these (b) (4)  
(b) (4)

As agreed (b) (4)  
(b) (4)  
(b) (4)

It is also based on (b) (4)  
(b) (4)

We are doing (b) (4)  
(b) (4)  
(b) (4) We are  
(b) (4)

No one should be (b) (4)  
(b) (4)

Sorry if this is too much information, but it seemed like it needed to be said.

Barney

---

**From:** Neuzil, Kathleen (b) (6)  
**Sent:** Wednesday, March 11, 2020 9:06 PM  
**To:** Roberts, Chris (NIH/NIAID) [E] (b) (6); Ashley Miller (b) (6)  
Andrews, Charla (NIH/NIAID) [C] (b) (6); Arega, Janice (NIH/NIAID) [E]  
(b) (6); Barbara A. Carste (b) (6); Beigel, John (NIH) [E]  
(b) (6); Hoang, Binh (NIH/NIAID) [E] (b) (6); Cassandra Karcs  
(b) (6); Harrington, Crystal (NIH/NIAID) [E]  
(b) (6); Sindall, Elisa (NIH/NIAID) [E] (b) (6); Elsafty, Mohamed  
(NIH/NIAID) [C] (b) (6); Kenny, Frank (NIH/NIAID) [E] (b) (6)  
Chun, Guinevere (NIH/NIAID) [E] (b) (6); Gill, Ranjodh (NIH/NIAID) [E]  
(b) (6); Graham, Barney (NIH/VRC) [E] (b) (6); Bennett Hamilton  
(b) (6); Hill, Heather (b) (6); Jim Albert  
(b) (6); Khan, Ahsen (NIH/NIAID) [C] (b) (6); Koo, Hyung (NIH/NIAID)  
[E] (b) (6); Ledgerwood, Julie (NIH/NIAID) [E] (b) (6); Lee, Marina  
(NIH/NIAID) [E] (b) (6); Linda McNeil (b) (6); Lisa A. Jackson  
(b) (6); Makhene, Mamodikoe (NIH/NIAID) [E] (b) (6); Mat  
Makowski (b) (6); Maya Dunstan <(b) (6)> Morabito, Kaitlyn  
(NIH/VRC) [E] (b) (6); Nayak, Seema (NIH/NIAID) [E] (b) (6);  
Ormanoski, Kathy (NIH/NIAID) [E] (b) (6); Pikaart-Tautges, Rhonda (NIH/NIAID) [E]  
(b) (6); Rhea Coler (b) (6); Kim, Sonnie (NIH/NIAID) [E]  
(b) (6); Veronica Faughnan <(b) (6)> Buchanan, Wendy  
(NIH/NIAID) [E] (b) (6); Schuster, Claire (NIH/NIAID) [E] (b) (6);  
NIAID BUGS <BUGS@niaid.nih.gov>  
**Subject:** RE: Crisis Communication and trial questions

Another request I'm passing on from Lisa:

"Another thing I would like to be very clear on is what (b) (4)

(b) (4)

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**From:** Roberts, Chris (NIH/NIAID) [E] (b) (6)  
**Sent:** Wednesday, March 11, 2020 6:06 PM  
**To:** Neuzil, Kathleen (b) (6); Ashley Miller <(b) (6)> Andrews,  
Charla (NIH/NIAID) [C] (b) (6); Arega, Janice (NIH/NIAID) [E]  
(b) (6); Barbara A. Carste <(b) (6)> Beigel, John (NIH) [E]  
(b) (6); Hoang, Binh (NIH/NIAID) [E] (b) (6); Cassandra Karcs  
(b) (6); corona (b) (6); Harrington, Crystal (NIH/NIAID) [E]  
(b) (6); Sindall, Elisa (NIH/NIAID) [E] (b) (6); Elsafty, Mohamed  
(NIH/NIAID) [C] (b) (6); Kenny, Frank (NIH/NIAID) [E] (b) (6);

Chun, Guinevere (NIH/NIAID) [E] <(b) (6)>; Gill, Ranjodh (NIH/NIAID) [E]  
(b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)>; Bennett Hamilton  
(b) (6)>; Hill, Heather (b) (6); Jim Albert  
(b) (6)>; Khan, Ahsen (NIH/NIAID) [C] (b) (6)>; Koo, Hyung (NIH/NIAID)  
[E] (b) (6)>; Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)>; Lee, Marina  
(NIH/NIAID) [E] <(b) (6) Linda McNeil <(b) (6); Lisa A. Jackson  
(b) (6)>; Makhene, Mamodikoe (NIH/NIAID) [E] (b) (6)>; Mat  
Makowski (b) (6)>; Maya Dunstan (b) (6)>; Morabito, Kaitlyn  
(NIH/VRC) [E] (b) (6)>; Nayak, Seema (NIH/NIAID) [E] (b) (6);  
Ormanoski, Kathy (NIH/NIAID) [E] (b) (6)>; Pikaart-Tautges, Rhonda (NIH/NIAID) [E]  
(b) (6)>; Rhea Coler (b) (6)>; Kim, Sonnie (NIH/NIAID) [E]  
(b) (6)>; Veronica Faughnan (b) (6)>; Buchanan, Wendy  
(NIH/NIAID) [E] (b) (6)>; Schuster, Claire (NIH/NIAID) [E] (b) (6)  
NIAID BUGS <[BUGS@niaid.nih.gov](mailto:BUGS@niaid.nih.gov)>

**Subject:** RE: Crisis Communication and trial questions

Hi Kathy,

NIAID is also working on some messaging points. May make sense to coordinate so as to provide common, consistent messaging. I've included our BUGS team who works with the office of communication and government relations, who have been working to address this.

Chris

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**From:** Neuzil, Kathleen (b) (6)  
**Sent:** Wednesday, March 11, 2020 5:59 PM  
**To:** Ashley Miller (b) (6)>; Andrews, Charla (NIH/NIAID) [C] (b) (6);  
Arega, Janice (NIH/NIAID) [E] (b) (6); Barbara A. Carste <(b) (6)>  
Beigel, John (NIH) [E] (b) (6)>; Hoang, Binh (NIH/NIAID) [E] (b) (6);  
Cassandra Karcs <(b) (6)>; corona <(b) (6)>; Harrington, Crystal  
(NIH/NIAID) [E] <(b) (6); Sindall, Elisa (NIH/NIAID) [E] <(b) (6)>;  
Elsafy, Mohamed (NIH/NIAID) [C] (b) (6)>; Kenny, Frank (NIH/NIAID) [E]  
(b) (6)>; Chun, Guinevere (NIH/NIAID) [E] <(b) (6); Gill, Ranjodh  
(NIH/NIAID) [E] (b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)>;  
Bennett Hamilton <(b) (6)>; Hill, Heather (b) (6)>; Jim Albert  
(b) (6); Khan, Ahsen (NIH/NIAID) [C] (b) (6); Koo, Hyung (NIH/NIAID)  
[E] (b) (6); Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)>; Lee, Marina  
(NIH/NIAID) [E] (b) (6)>; Linda McNeil (b) (6)>; Lisa A. Jackson  
(b) (6)>; Makhene, Mamodikoe (NIH/NIAID) [E] <(b) (6)>; Mat  
Makowski (b) (6)>; Maya Dunstan (b) (6)>; Morabito, Kaitlyn  
(NIH/VRC) [E] (b) (6)>; Nayak, Seema (NIH/NIAID) [E] (b) (6)  
Ormanoski, Kathy (NIH/NIAID) [E] (b) (6)>; Pikaart-Tautges, Rhonda (NIH/NIAID) [E]  
(b) (6)>; Rhea Coler (b) (6)>; Roberts, Chris (NIH/NIAID) [E]  
(b) (6)>; Kim, Sonnie (NIH/NIAID) [E] (b) (6); Veronica Faughnan

(b) (6); Buchanan, Wendy (NIH/NIAID) [E]

(b) (6)>

**Subject:** Crisis Communication and trial questions

**Importance:** High

Dear All,

I am including the Clinical Ops meeting attendees on this email.

One of the action items in follow-up to our Monday call was

(b) (4)

(b) (4)

We should probably have a final version by Friday, and then be sure to circulate to the relevant group who could get questions about the trial.

Lisa- please add any information I have missed, realizing you are very busy.

Kathy

(b) (4)

**From:** Ashley Miller <(b) (6)>

**Sent:** Wednesday, March 11, 2020 10:26 AM

**To:** Andrews, Charla (NIH/NIAID) [C] (b) (6)>; Arega, Janice (NIH/NIAID) [E] (b) (6)>; Ashley Miller (b) (6)>; Barbara Carste (b) (6)>; Beigel, John (NIH) [E] (b) (6)>; Hoang, Binh (NIH/NIAID) [E] (b) (6)>; Cassandra Karcs (b) (6)>; corona (b) (6)>; Harrington, Crystal (NIH/NIAID) [E] (b) (6)>; Elisa Sindall (b) (6)>; Elsafy, Mohamed (NIH/NIAID) [C] (b) (6)>; (b) (6) Graham, Barney (NIH/VRC) [E] (b) (6)>; Hamilton Bennett <(b) (6)>; Hill, Heather (b) (6)>; Jim Albert (b) (6)>; Neuzil, Kathleen (b) (6)>; Khan, Ahsen (NIH/NIAID) [C] (b) (6)>; Koo, Hyung (NIH/NIAID) [E] (b) (6)>; Ledgerwood, Julie (NIH/NIAID) [E] (b) (6)>; Lee, Marina (NIH/NIAID) [E] (b) (6)>; Linda McNeil (b) (6)>; Lisa A. Jackson (b) (6)>; Makhene, Mamodikoe (NIH/NIAID) [E] (b) (6)>; Mat Makowski (b) (6)>; Maya



Dunstan (b) (6); Morabito, Kaitlyn (NIH/VRC) [E] <(b) (6)>  
Nayak, Seema (NIH/NIAID) [E] (b) (6); Ormanoski, Kathy (NIH/NIAID) [E]  
(b) (6); Pikaart-Tautges, Rhonda (NIH/NIAID) [E] (b) (6); Rhea  
Coler (b) (6); Roberts, Chris (NIH/NIAID) [E] <(b) (6)>; Kim,  
Sonnie (NIH/NIAID) [E] (b) (6); Veronica Faughnan  
(b) (6); Buchanan, Wendy (NIH/NIAID) [E] <(b) (6)>  
**Subject:** (b) (4) Clinical Ops Meeting Minutes 9 Mar 2020 - DRAFT

Dear all,

Please find attached draft meeting minutes from the March 9 Clinical Operations call. Kindly review and return any comments/edits to me by **noon on Friday, March 13**. Then the minutes will be finalized and circulated to the team.

Many thanks,  
Ashley

**Ashley Miller, MA** | Research Associate

359 Blackwell Street, Suite 200 | Durham, NC 27701

O: (b) (6) ext. 11383 | F: 919.405.1421 | (b) (6) | [www.fhi360.org](http://www.fhi360.org) | [FHI 360](#)

[Facebook](#)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 28 Jan 2020 16:29:51 +0000  
**To:** Routh, Jennifer (NIH/NIAID) [E]; Hiatt, Nissa (NIH/VRC) [C]  
**Cc:** Mascola, John (NIH/VRC) [E]; Marston, Hilary (NIH/NIAID) [E]  
**Subject:** Fwd: RUSSIAN TV URGENT

FYI. I think this is a first for me to have an inquiry from Russian media. I will wait for your advice.

Barney

Sent from my iPhone

Begin forwarded message:

**From:** Абакумова Дарья Владимировна <DAbakumova@ntv.ru>  
**Date:** January 28, 2020 at 2:19:18 PM GMT+1  
**To:** "Graham, Barney (NIH/VRC) [E]" <(b) (6)>  
**Subject:** RUSSIAN TV URGENT

Hello! My name is Daria. I am producer of one of the most popular Russian federal TV-channel NTV. I am making the video report about Coronavirus.

So we really need your opinion about that. So I am writing to request your assistance with this matter. Would you be so kind to give us interview? We need your help! Your contribution in this research is invaluable. Our channel is the most popular in Russia (NTV Russia broadcasting company). If you will agree to help me, our camera crew (operator and reporter) will come in your center when it will be comfortable for you. We work in short time, so we need to meet with you on Wednesday, Thursday or Friday if you would be so kind to help us.

Thank you very much. We'll be really happy for this.

We look forward to receiving your reply as soon as possible

*Best regards,*

**Daria Abakumova**  
**Foreign Desk, Producer**  
**The Central TV Show**  
**NTV Broadcasting Company**  
**tel.** (b) (6)  
**email:** [dabakumova@ntv.ru](mailto:dabakumova@ntv.ru)

(b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 15:14:18 +0000  
**To:** Kathleen Neuzil  
**Subject:** FW: (b) (4)  
**Attachments:** (b) (4)  
(b) (4)\_BG.docx

FYI

BG

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Saturday, March 7, 2020 11:12 AM  
**To:** Roberts, Chris (NIH/NIAID) [E] (b) (6)>; Beigel, John (NIH) [E]  
(b) (6)>; Nayak, Seema (NIH/NIAID) [E] <(b) (6)>; Lisa A. Jackson  
(b) (6)>; Erbelding, Emily (NIH/NIAID) [E] (b) (6); Lisa A. Jackson  
(b) (6)  
**Cc:** Buchanan, Wendy (NIH/NIAID) [E] (b) (6)>; Makhene, Mamodikoe (NIH/NIAID)  
[E] (b) (6)>  
**Subject:** RE: (b) (4)

Thanks Chris,

I didn't see this before I just sent that last email. Your writing is much more accessible than mine. I made a few additional comments on your document in the margins.

(b) (4)

Barney

---

**From:** Roberts, Chris (NIH/NIAID) [E] (b) (6)>  
**Sent:** Friday, March 6, 2020 9:52 PM  
**To:** Beigel, John (NIH) [E] (b) (6)>; Nayak, Seema (NIH/NIAID) [E]  
(b) (6); Lisa A. Jackson (b) (6); Graham, Barney (NIH/VRC) [E]  
(b) (6)>; Erbelding, Emily (NIH/NIAID) [E] (b) (6)>; Lisa A. Jackson  
(b) (6)

**Cc:** Buchanan, Wendy (NIH/NIAID) [E] (b) (6); Makhene, Mamodikoe (NIH/NIAID) [E] (b) (6)>

**Subject:** Re: 20-0003 thoughts on evolving Seattle situation

See attached as a first attempt at an informational messaging document. Wordy and too much information, brain no longer functioning, but discusses some talking points that can be tweaked. I've included Barney and Emily, as she is likely to be asked questions by reporters tomorrow. Please edit/delete/add accordingly.

Chris

---

**From:** "Beigel, John (NIH) [E]" (b) (6)>

**Date:** Friday, March 6, 2020 at 5:14 PM

**To:** "Roberts, Chris (NIH/NIAID) [E]" (b) (6)>, "Nayak, Seema (NIH/NIAID) [E]" (b) (6) "Lisa A. Jackson" (b) (6)>

**Cc:** "Buchanan, Wendy (NIH/NIAID) [E]" (b) (6)>, "Makhene, Mamodikoe (NIH/NIAID) [E]" (b) (6)

**Subject:** Re: (b) (4)

Chris, we have reporters now asking (b) (4)  
(b) (4)

--

**John Beigel, M.D.**

Associate Director for Clinical Research

Division of Microbiology and Infectious Diseases

National Institute of Allergy and Infectious Diseases (NIAID)

Phone: (b) (6)

email: (b) (6)

---

**From:** Chris Roberts (b) (6)>

**Date:** Sunday, March 1, 2020 at 3:21 PM

**To:** John Beigel (b) (6), Seema Nayak (b) (6)>, "Lisa A. Jackson" <(b) (6)>

**Cc:** "Buchanan, Wendy (NIH/NIAID) [E]" <(b) (6)>, "Makhene, Mamodikoe (NIH/NIAID) [E]" (b) (6)>

**Subject:** Re: (b) (4)

John,

I fully agree (b) (4)  
(b) (4)

Chris

---

**From:** "Beigel, John (NIH) [E]" (b) (6)  
**Date:** Sunday, March 1, 2020 at 2:37 PM  
**To:** "Roberts, Chris (NIH/NIAID) [E]" (b) (6), "Nayak, Seema (NIH/NIAID) [E]" (b) (6), "Lisa A. Jackson" (b) (6)  
**Cc:** "Buchanan, Wendy (NIH/NIAID) [E]" (b) (6), "Makhene, Mamodikoe (NIH/NIAID) [E]" <(b) (6)>  
**Subject:** Re: 20-0003 thoughts on evolving Seattle situation

I would view it slightly differently. (b) (4)

(b) (4)

This is the third email about this topic this weekend, so we may want to write something up to send to the IRB and FDA so everyone understands the situation, our assessment, and the plan (not an amendment, just an information item of sorts).

John

--  
**John Beigel, M.D.**  
Associate Director for Clinical Research  
Division of Microbiology and Infectious Diseases  
National Institute of Allergy and Infectious Diseases (NIAID)  
Phone: (b) (6)  
email (b) (6)

---

**From:** Chris Roberts (b) (6)  
**Date:** Sunday, March 1, 2020 at 1:49 PM  
**To:** John Beigel (b) (6), Seema Nayak (b) (6), "Lisa A. Jackson" (b) (6)  
**Cc:** "Buchanan, Wendy (NIH/NIAID) [E]" (b) (6), "Makhene, Mamodikoe



(NIH/NIAID) [E]" <[REDACTED] (b) (6)>

**Subject:** Re: [REDACTED] (b) (4)

I agree and am also [REDACTED]

(b) (4)

(b) (4)

Chris

**From:** "Lisa A. Jackson" [REDACTED] (b) (6) >

**Date:** Sunday, March 1, 2020 at 11:15 AM

**To:** "Beigel, John (NIH) [E]" [REDACTED] (b) (6) >, "Roberts, Chris (NIH/NIAID) [E]"

[REDACTED] (b) (6) "Nayak, Seema (NIH/NIAID) [E]" [REDACTED] (b) (6), "Buchanan, Wendy (NIH/NIAID) [E]" [REDACTED] (b) (6)

**Subject:** [REDACTED] (b) (4)

(b) (4)

Lisa

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 30 Mar 2020 18:54:21 +0000  
**To:** Mascola, John (NIH/VRC) [E]  
**Subject:** Re: perspective for Science

Thanks John.

BG

Sent from my iPhone

On Mar 30, 2020, at 2:50 PM, Mascola, John (NIH/VRC) [E] (b) (6) wrote:

Hi Barney,

The perspective makes some critical points. It will be important to get this into literature!

Some quick comments on attached file. Perhaps main suggestion is to end with some recommendations or something that provides a simple roadmap for progress.

Lastly, this brings me way back in time -see the Summary Report on ADE from 1993. .

John

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Sent:** Sunday, March 29, 2020 10:31 PM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6)  
**Subject:** RE: perspective for Science

Here is first draft.

BG

---

**From:** Mascola, John (NIH/VRC) [E] (b) (6)  
**Sent:** Sunday, March 29, 2020 9:21 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Subject:** Re: perspective for Science

Hi Barney,

Good! The field could really use a cogent piece on this topic. It's short, but it would be widely read and could be influential.

Happy to read or help as needed.

Just let Tony know once ready to submit. That's all that he would want.

Thanks  
John

Sent from my iPhone

On Mar 29, 2020, at 21:00, Graham, Barney (NIH/VRC) [E] (b) (6) wrote:

Hi John,

I was invited to write a ~1000 word perspective for Science that would be lightly edited and published fast (~1 week). I decided to write it about the Benefit/Risk calculation for rapid development of a COVID-19 vaccine. I'm using it as a place to discuss my thoughts on the risk of vaccine-enhanced illness and the way the various immune phenomena should be categorized and separated. This will not be easy in that short space because it could be a 5000-7000 word review with >100 references. However, I think putting something out there that a larger audience would read could be helpful.

I wondered what you thought about how to handle this with Dr. Fauci. I know he doesn't have time for much right now, but I don't want him to be blindsided with something that may be hard to explain. I don't quite have a full draft yet, but could have something in a few more days.

Barney

\*\*\*\*\*

Barney S. Graham, MD, PhD  
Senior Investigator  
Deputy Director, Vaccine Research Center

Chief, Viral Pathogenesis Laboratory  
National Institute of Allergy and Infectious Diseases, NIH  
40 Convent Drive, MSC 3017  
Bldg 40, Room 2502  
Bethesda, MD 20892-3017  
Phone: (b) (6)

URL: <https://www.niaid.nih.gov/research/barney-graham-md-phd>

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<Risk-benefit for COVID-19 Science 2020 v4\_jrm.docx>  
<Summary Report ADE ARHR 1993.pdf>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 24 Feb 2020 13:05:09 +0000  
**To:** Morabito, Kaitlyn (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: Barney, John tick-tock slide for Tony COVID-2019

Not sure when the Science paper will be in print, so may be a while on the cover.

We should consider submitting a cover image.

BG

---

**From:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >  
**Sent:** Monday, February 24, 2020 8:03 AM  
**To:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >; Graham, Barney (NIH/VRC) [E]  
<bgraham@mail.nih.gov>  
**Subject:** Re: Barney, John tick-tock slide for Tony COVID-2019

I think I'll make work on this timeline, and then make a second slide with a table of, i.e. 4 days from published sequences to sequence selection for GMP product. X number of days from sequence to publication, etc.

Does Brenda usually make the cover images, with paper authors, etc for publications? If so, I can ask her to do that.

---

**From:** Kizzmekia Corbett (b) (6)  
**Date:** Monday, February 24, 2020 at 8:00 AM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6), Barney Graham  
(b) (6)  
**Subject:** Re: Barney, John tick-tock slide for Tony COVID-2019

I like this way, I also like inclusions of critical publications in the timeline and the "behind the scenes" like IND submission & Moderna's CEPI funding acquisition. And crediting the apt contributors at each step to highlight that collaborations makes this possible.

Sent from the mobile device of:

Kizzmekia S. Corbett, PhD  
Senior Research Fellow  
coVip Scientific Lead  
VRC | NIAID | NIH  
(b) (6)



---

**From:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6)  
**Date:** Monday, February 24, 2020 at 7:56:46 AM  
**To:** "Graham, Barney (NIH/VRC) [E]" (b) (6), "Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6)  
**Subject:** Re: Barney, John tick-tock slide for Tony COVID-2019

I can work on adding to this, if this is what we're looking for.

Do we have deadline for this?

---

**From:** Barney Graham <(b) (6)>  
**Date:** Sunday, February 23, 2020 at 7:06 PM  
**To:** "Morabito, Kaitlyn (NIH/VRC) [E]" (b) (6), Kizzmekia Corbett (b) (6)  
**Subject:** Fwd: Barney, John tick-tock slide for Tony COVID-2019

FYI. We need to work on this. We will all want to use it.

BG

Sent from my iPhone

Begin forwarded message:

**From:** "Graham, Barney (NIH/VRC) [E]" (b) (6)  
**Date:** February 23, 2020 at 7:05:36 PM EST  
**To:** "Mascola, John (NIH/VRC) [E]" (b) (6)  
**Cc:** "Folkers, Greg (NIH/NIAID) [E]" (b) (6), "Ledgerwood, Julie (NIH/NIAID) [E]" (b) (6)  
**Subject:** Re: Barney, John tick-tock slide for Tony COVID-2019

Hi Greg. We have the outline of a slide and have been thinking about how to show this. Will work with Kaitlyn. Notably, VRC did not do this one by ourselves. Many groups were involved which required a lot of coordination.

Barney

Sent from my iPhone

On Feb 23, 2020, at 5:29 PM, Mascola, John (NIH/VRC) [E] (b) (6) > wrote:

Barney has been tracking this – so will let him respond. Julie also copied.

Of note, DMID holding IND and will do phase 1 – so this is inter divisional NIAID.

Currently, I don't know of a slide – but we could ask our clinical group to make one – as we have before.

Best,  
John

---

**From:** Folkers, Greg (NIH/NIAID) [E] (b) (6) >

**Sent:** Sunday, February 23, 2020 5:18 PM

**To:** Graham, Barney (NIH/VRC) [E] (b) (6) >; Mascola, John (NIH/VRC) [E] (b) (6)

**Cc:** Folkers, Greg (NIH/NIAID) [E] (b) (6)

**Subject:** Barney, John tick-tock slide for Tony COVID-2019

Barney, John

We want to make a timeline slide showing how fast we (you) have moved on COVID-2019

Do you have a timeline (text or slide) that I could use to flesh out/improve on what I have below

- 12-31-2019 WHO alerted of cluster of pneumonia cases in Wuhan, China
- 1-9-2020 WHO announces that outbreak in Wuhan caused by a novel coronavirus (now called SARS-CoV-2)
- 1-10-2020 Chinese release first genome of SARS-CoV-2
- 1-28-2020 VRC: Stabilized spike protein designed and samples produced
- 2-10-2020 VRC: 3D molecular structure of spike protein reconstructed; manuscript submitted to Science
- 2-17-2020 VRC: Manuscript accepted by *Science*
- 2-19-2020 VRC: Paper published online by *Science*
- 2-21-2020 VRC: IND for mRNA vaccine submitted

Thanks as ever for your help

**Disclaimer:** Any third-party material in this email has been shared for internal use under fair use provisions of U.S. copyright law, without further verification of its accuracy/veracity. It does not necessarily represent my views nor those of NIAID, NIH, HHS, or the U.S. government.

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 24 Apr 2020 01:46:51 +0000  
**To:** (b) (6); Wang, Lingshu (NIH/VRC) [E]  
**Subject:** RE: Please, double-check for PlosOne accepted article. RE: PONE-D-19-34811R1: Final Decision Being Processed - [EMID:ab1dd07484157815]  
**Attachments:** PONE-D-19-34811R1\_ftc\_BG.docx

I added Dr. McLellan's middle initial in the author line of the attached paper, and corrected my affiliation. I also added a funding source in the acknowledgments.

Below you have Dr. McLellan's last name spelled incorrectly. It begins Mc not Mac.

Thank you for completing the paper.

Best wishes,

Barney

**From:** (b) (6) >  
**Sent:** Thursday, April 23, 2020 9:20 PM  
**To:** Wang, Lingshu (NIH/VRC) [E] (b) (6); Graham, Barney (NIH/VRC) [E]  
(b) (6) >  
**Subject:** Please, double-check for PlosOne accepted article. RE: PONE-D-19-34811R1: Final Decision Being Processed - [EMID:ab1dd07484157815]

Dear Barenly and Lingshu

Finally, our effort was accepted by PLoSOne.  
PlosOne editor required the final check-points.  
Could you please confirm these? I also attach the final version of manuscript.  
After you confirm these, then I'll correct and submit the final until April 26th .

Thanks

Best regards,

Hansaem

**JOURNAL REQUIREMENTS:**

1. Please ensure that the author list and affiliations are correct on the title page of your manuscript, and that your author contributions, competing interests, and financial disclosure are correct as listed below. All of these sections will be indexed in PubMed and published by PLOS ONE as you have written them. Please email [plosone@plos.org](mailto:plosone@plos.org) if any changes to this content need to be made.

Jang-Hoon Choi

Data curation  
Methodology  
Validation  
Writing - original draft

Hye-Min Woo  
Methodology

Tae-young Lee  
Methodology

So-young Lee  
Methodology  
Validation

Sang-Mu Shim  
Formal analysis

Woo-Jung Park  
Methodology

Jeong-Sun Yang  
Validation

Joo Ae Kim  
Methodology

Mi-Ran Yun  
Software  
Visualization

Dae-Won Kim  
Software

Sung Soon Kim  
Funding acquisition  
Investigation  
Project administration  
Supervision

Yi Zhang  
Methodology

Wei Shi  
Methodology  
Resources

Lingshu Wang  
Conceptualization  
Methodology

Barney Scott Graham  
Conceptualization  
Investigation  
Supervision  
Validation

John Mascola  
Conceptualization  
Investigation

Nanshuang Wang  
Conceptualization

## Resources

Jason MacLellan  
Conceptualization  
Resources

Joo-Yeon Lee  
Funding acquisition  
Investigation  
Project administration

Hansaem Lee  
Conceptualization  
Data curation  
Project administration  
Supervision  
Validation  
Writing – original draft

Please see here for the full list and definition of contributor roles:  
<http://journals.plos.org/plosone/s/authorship#loc-author-contributions>

**Competing Interests:** We also state that competing interests: the patent name "MONOCLONAL ANTIBODY FOR SPIKE PROTEIN OF MIDDLE EAST RESPIRATORY SYNDROME CORONAVIRUS, AND USE THEREOF" and No. 10-1895229 (Korean patent) (PCT application No. PCT KR2018009754). This does not alter our adherence to PLOS ONE policies on sharing data and materials.

**Financial Disclosure:** This study was supported by a Korea National Institute of Health fund (2016-NG47001-00, 4845-300-210-13). J. C., S. S. K., B. S. G., J. R. M., L. W. and H. L. designed the experiments. J. C., L. W., H. M. W. and H. L. expressed and purified antibodies. J. C. and H. L. prepared this manuscript. H. M. W., J. A. K. and W. J. P. carried out the neutralizing assay with live MERS-CoV. Y. Z. and W. S. expressed and purified RBD, S1, and S2 proteins. N. W. and J. M. designed and produced the S-2P probe. T. L., S. L., S. M. S. and J. S. Y. performed the animal experiments. M. R. Y. and D. W. K. analyzed the computational structure modeling of RBD and mAb interaction. J. C. and H. L. wrote the paper with contributions from S. S. K., L. W. and B. S. G.

=> I will added more explanation (blue letters).

3. Authors Barney S. Graham, John R. Mascola, and Jason McLellan are listed as Barney Scott Graham, John Mascola, and Jason MacLellan in the online submission form; we are unsure which version is correct. If the name is incorrect in the manuscript, please correct this. If the name is incorrect in the submission form, please let us know so we can correct the author's profile for you. Please note that the use of middle initials/names should be consistent among the manuscript's author list, the author list in the submission form, and the Author Contributions initials.

=> Please double-check your names.

----- 원본 메일 -----

보낸사람 : PLOS ONE <[em@editorialmanager.com](mailto:em@editorialmanager.com)>

받는사람 : Hansaem Lee <(b) (6)>

받은날짜 : 2020년 4월 22일(수) 22:39:40

제목 : PONE-D-19-34811R1: Final Decision Being Processed - [EMID:ab1dd07484157815]

CC: "Jang-Hoon Choi" (b) (6), "Hye-Min Woo" (b) (6), "Tae-young Lee" (b) (6),  
"So-young Lee" (b) (6), "Sang-Mu Shim" (b) (6), "Woo-Jung Park" (b) (6),  
(b) (6), "Jeong-Sun Yang" (b) (6), "Joo Ae Kim" (b) (6), "Mi-Ran Yun"  
(b) (6), "Dae-Won Kim" (b) (6), "Sung Soon Kim" (b) (6), "Yi Zhang"



(b) (6) "Wei Shi" (b) (6) "Lingshu Wang" (b) (6) "Barney Scott Graham"  
(b) (6), "John Mascola" (b) (6), "Nanshuang Wang"  
(b) (6) "Jason MacLellan" (b) (6), "Joo-Yeon Lee"  
(b) (6)

Characterization of a human monoclonal antibody generated from a B-cell specific for a prefusion-stabilized spike protein of Middle East respiratory syndrome coronavirus  
PONE-D-19-34811R1

Dear Dr. Lee,

We are pleased to inform you that your manuscript has been judged scientifically suitable for publication and will be formally accepted for publication once it complies with all outstanding technical requirements.

Within one week, you will receive an e-mail containing information on the amendments required prior to publication. When all required modifications have been addressed, you will receive a formal acceptance letter and your manuscript will proceed to our production department and be scheduled for publication.

Shortly after the formal acceptance letter is sent, an invoice for payment will follow. To ensure an efficient production and billing process, please log into Editorial Manager at <https://www.editorialmanager.com/pone/>, click the "Update My Information" link at the top of the page, and update your user information. If you have any billing related questions, please contact our Author Billing department directly at [authorbilling@plos.org](mailto:authorbilling@plos.org).

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With kind regards,

Stefan Pöhlmann, Ph.D.  
Academic Editor  
PLOS ONE

Additional Editor Comments (optional):

Reviewers' comments:

Reviewer's Responses to Questions

#### Comments to the Author

1. If the authors have adequately addressed your comments raised in a previous round of review and you feel that this manuscript is now acceptable for publication, you may indicate that here to bypass the "Comments to the Author" section, enter your conflict of interest statement in the "Confidential to Editor" section, and submit your "Accept" recommendation.

Reviewer #1: All comments have been addressed

Reviewer #2: All comments have been addressed

Reviewer #3: All comments have been addressed

2. Is the manuscript technically sound, and do the data support the conclusions?

The manuscript must describe a technically sound piece of scientific research with data that supports the conclusions. Experiments must have been conducted rigorously, with appropriate controls, replication, and sample sizes. The conclusions must be drawn appropriately based on the data presented.

Reviewer #1: Yes

Reviewer #2: (No Response)

Reviewer #3: Yes

---

3. Has the statistical analysis been performed appropriately and rigorously?

Reviewer #1: Yes

Reviewer #2: (No Response)

Reviewer #3: Yes

---

4. Have the authors made all data underlying the findings in their manuscript fully available?

The [PLOS Data policy](#) requires authors to make all data underlying the findings described in their manuscript fully available without restriction, with rare exception (please refer to the Data Availability Statement in the manuscript PDF file). The data should be provided as part of the manuscript or its supporting information, or deposited to a public repository. For example, in addition to summary statistics, the data points behind means, medians and variance measures should be available. If there are restrictions on publicly sharing data—e.g. participant privacy or use of data from a third party—those must be specified.

Reviewer #1: Yes

Reviewer #2: (No Response)

Reviewer #3: Yes

---

5. Is the manuscript presented in an intelligible fashion and written in standard English?

PLOS ONE does not copyedit accepted manuscripts, so the language in submitted articles must be clear, correct, and unambiguous. Any typographical or grammatical errors should be corrected at revision, so please note any specific errors here.

Reviewer #1: No

Reviewer #2: (No Response)

Reviewer #3: Yes

---

6. Review Comments to the Author


Please use the space provided to explain your answers to the questions above. You may also include additional comments for the author, including concerns about dual publication, research ethics, or publication ethics. (Please upload your review as an attachment if it exceeds 20,000 characters)

Reviewer #1: (No Response)

Reviewer #2: (No Response)

Reviewer #3: Re: PONE-D-19-34811R1

(b) (6), (b) (5)



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If you choose “no”, your identity will remain anonymous but your review may still be made public.

**Do you want your identity to be public for this peer review?** For information about this choice, including consent withdrawal, please see our [Privacy Policy](#).

Reviewer #1: No

Reviewer #2: No

Reviewer #3: No

---

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 30 Jan 2020 16:05:44 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C]; Routh, Jennifer (NIH/NIAID) [E]  
**Cc:** Bok, Karin (NIH/VRC) [E]; Morabito, Kaitlyn (NIH/VRC) [E]; Marston, Hilary (NIH/NIAID) [E]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** Fwd: media query from Peter Beaumont, The Guardian

FYI.

BG

Sent from my iPhone

Begin forwarded message:

**From:** Peter Beaumont <peter.beaumont@theguardian.com>  
**Date:** January 30, 2020 at 3:48:48 PM GMT+1  
**To:** "Graham, Barney (NIH/VRC) [E]" (b) (6)  
**Subject:** media query from Peter Beaumont, The Guardian

Dear Dr Graham, I wonder if you would have time for a phone interview on the subject of the search for a vaccine for the Wuhan coronavirus. We are quite keen to do something on the science.

best wishes Peter

--

**Peter Beaumont**

Guardian News & Media

-----

Work +44 203 353 4322

Guardian mobile (b) (6)



UK mobile - (b) (6)

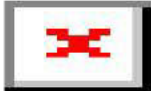
[peter.beaumont@theguardian.com](mailto:peter.beaumont@theguardian.com)

PGP: [Public key](#)

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 23 Dec 2019 19:07:52 +0000  
**To:** Stein, Judy (NIH/VRC) [C]; Morabito, Kaitlyn (NIH/VRC) [E]  
**Subject:** RE: Discussion with Murray McCutcheon at Abcellera

Thanks Judy.

BG

---

**From:** Stein, Judy (NIH/VRC) [C] (b) (6)  
**Sent:** Monday, December 23, 2019 1:37 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6); Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)  
**Subject:** Discussion with Murray McCutcheon at Abcellera

Hi Barney and Kaitlyn,  
Murray just called me to talk about CRADAs (b) (4)  
I explained the process to him. (b) (4), (b) (5)  
(b) (4), (b) (5), but I asked him to send me a brief  
write up of all of the work to be performed under each, and then I can discuss it with Amy and Carol.

(b) (4), (b) (5)  
(b) (4), (b) (5)

Once Murray sends me the drafts, I will make sure that you receive a copy.  
He said that he would be sending this after the New Year.

Thanks,  
Judy

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Wed, 29 Apr 2020 15:51:47 +0000  
**To:** Carlton, Kevin (NIH/VRC) [E]  
**Subject:** Re: mRNA-1273 [REDACTED] (b) (4)

I'm going to call Sonny.

BG

Sent from my iPhone

On Apr 29, 2020, at 11:47 AM, Carlton, Kevin (NIH/VRC) [E] [REDACTED] (b) (6) wrote:

Let me know if you would like me to extend the 4:00 invite to you with Catherine and Sonnie Kim (who coordinates the Vandy work).

Kevin

---

**From:** Graham, Barney (NIH/VRC) [E] [REDACTED] (b) (6)>  
**Sent:** Wednesday, April 29, 2020 11:29 AM  
**To:** Carlton, Kevin (NIH/VRC) [E] [REDACTED] (b) (6)  
**Subject:** Fwd: mRNA-1273 [REDACTED] (b) (4)

Hi Kevin,

Jim Chappell doesn't think he will be getting [REDACTED] (b) (4) till next week. Can you tell me who is in charge of shipping? Can this be moved up?

BG

Sent from my iPhone

Begin forwarded message:

**From:** "Chappell, Jim" [REDACTED] (b) (6)>  
**Date:** April 29, 2020 at 11:05:52 AM EDT  
**To:** "Corbett, Kizzmekia (NIH/VRC) [E]" <[REDACTED] (b) (6)>  
**Cc:** "Stevens, Laura J" [REDACTED] (b) (6)>, "Graham, Barney (NIH/VRC) [E]" [REDACTED] (b) (6)>  
**Subject:** RE: mRNA-1273 [REDACTED] (b) (4)

Hi Kizzy.

(b) (4), I believe. Catherine Luke will work out details of specimen shipping, which I cannot imagine occurring before next week.

How quickly can you dispatch (b) (4) Today?

Thanks.

Jim

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
**Sent:** Tuesday, April 28, 2020 9:05 PM  
**To:** Chappell, Jim <(b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** Stevens, Laura J (b) (6)>; Denison, Mark (b) (6)  
**Subject:** Re: mRNA-1273 (b) (4)

Thanks for your reply Jim. The expedited (b) (4) are most imminent. Please let us know if and when you could test (b) (4)

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
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Personal: (919) 218-9101  
Fax: (301) 480-2771

---

**From:** "Chappell, Jim" (b) (6)  
**Date:** Monday, April 27, 2020 at 10:58 PM  
**To:** Kizzmekia Corbett (b) (6)>, Barney Graham (b) (6)>  
**Cc:** "Stevens, Laura J" (b) (6), "Denison, Mark" (b) (6)>  
**Subject:** RE: mRNA-1273 (b) (4)

Hi Kizzy.

We are pleased to test. However, I believe Barney wants to (b) (4)  
(b) (4). Mark and I spoke with Barney earlier today about (b) (4)  
We unfortunately lack capacity for (b) (4) Let us know  
what you and Barney decide about testing priorities.

Thanks.

Jim

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >  
**Sent:** Monday, April 27, 2020 7:09 PM  
**To:** Chappell, Jim (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** Stevens, Laura J (b) (6) >  
**Subject:** Re: mRNA-1273 (b) (4)

Hi Jim,  
After discussions with Abcellera (b) (4)  
(b) (4) We, however, would love if you could (b) (4)  
(b) (4).

Please let us know (b) (4) (b) (4). We would only need (b) (4)  
(b) (4) If this is feasible, let me know (b) (4)  
(b) (4)

(b) (4)

--  
Kizzmekia S. Corbett, PhD



**Senior Research Fellow | Scientific Lead**  
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Personal: (b) (6)

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---

**From:** "Chappell, Jim" <(b) (6)>

**Date:** Tuesday, April 21, 2020 at 2:20 PM

**To:** Kizzmekia Corbett (b) (6)

**Cc:** "Stevens, Laura J" (b) (6)>

**Subject:** RE: mRNA-1273 (b) (4)

Hello Kizzy.

We may have more (b) (4) on Moderna (b) (4) than originally anticipated. We could potentially (b) (4) So, please (b) (4) at your convenience.

What are the (b) (4)?

Thanks.

Jim

---

**From:** Chappell, Jim

**Sent:** Monday, April 20, 2020 4:08 PM

**To:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) Graham, Barney (NIH/VRC) [E] (b) (6); Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)

**Cc:** Stevens, Laura J <(b) (6)>

**Subject:** RE: mRNA-1273 (b) (4)

Understood.

Let us get back to you, probably tomorrow.

Thanks.

Jim

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 11:52 AM  
**To:** Chappell, Jim <(b) (6)>; Graham, Barney (NIH/VRC) [E] (b) (6)  
Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)>  
**Cc:** Stevens, Laura J (b) (6)  
**Subject:** Re: mRNA-1273 (b) (4)

We would certainly, (b) (4)  
(b) (4) If it's not possible, we understand as well.

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
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---

**From:** "Chappell, Jim" (b) (6)>  
**Date:** Monday, April 20, 2020 at 12:50 PM  
**To:** Kizzmekia Corbett (b) (6)>, Barney Graham (b) (6),  
Kaitlyn Morabito (b) (6)>  
**Cc:** "Stevens, Laura J" (b) (6)>  
**Subject:** RE: mRNA-1273 (b) (4)

Limited due to (b) (4)  
(b) (4)

Are there (b) (4) that need quick attention?

Thanks.

Jim

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 11:28 AM

**To:** Chappell, Jim (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6)>;  
Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)>  
**Cc:** Stevens, Laura J (b) (6)>  
**Subject:** Re: mRNA-1273 (b) (4)

No, we just noticed the beauty in your curves. I guess we never sent you any (b) (4).

With that, what is your capacity for (b) (4) in the next couple of weeks?

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
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---

**From:** "Chappell, Jim" (b) (6)  
**Date:** Monday, April 20, 2020 at 12:25 PM  
**To:** Kizzmekia Corbett (b) (6)>, Barney Graham <(b) (6)>,  
Kaitlyn Morabito (b) (6)>  
**Cc:** "Stevens, Laura J" <(b) (6)>  
**Subject:** RE: mRNA-1273 (b) (4)

1. Yes, of course. See attached.
2. No technical changes. Are there specific aspects you have in mind?

Thanks.

Jim

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 11:12 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6) Chappell, Jim (b) (6)>;  
Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)  
**Cc:** Stevens, Laura J (b) (6)  
**Subject:** Re: mRNA-1273 (b) (4)

I agree these curves look great. Couple of questions:

(b) (4)

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

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Bethesda MD 20892

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Personal: (b) (6)

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---

**From:** Barney Graham (b) (6) >

**Date:** Monday, April 20, 2020 at 12:00 PM

**To:** "Chappell, Jim" (b) (6) >, Kaitlyn Morabito <(b) (6)>

**Cc:** "Stevens, Laura J" (b) (6) Kizzmekia Corbett

(b) (6)

**Subject:** RE: mRNA-1273 (b) (4)

Beautiful (b) (4) curves Jim. (b) (4) getting better each day.

Barney

---

**From:** Chappell, Jim (b) (6) >

**Sent:** Monday, April 20, 2020 11:27 AM

**To:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)

**Cc:** Stevens, Laura J (b) (6) >; Corbett, Kizzmekia (NIH/VRC) [E]

(b) (6) >; Graham, Barney (NIH/VRC) [E] (b) (6)

**Subject:** RE: mRNA-1273 (b) (4)

Thanks Kaitlyn.

Sorry; it was my (mis)understanding from our recent call that results of (b) (4)

(b) (4) I thought perhaps the reason was

(b) (4)

though I was unclear why Barney and Kizzy should not see this information. Pardon my erroneous conclusion from your comments.

We will keep you, Barney, and Kizzy updated on progress.

Best,

Jim

---

**From:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) > **Sent:** Monday, April 20, 2020 10:09 AM  
**To:** Chappell, Jim (b) (6) >  
**Cc:** Stevens, Laura J (b) (6) >; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >; Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Subject:** Re: mRNA-1273 (b) (4)

Dear Jim,

Thank you so much for this data. It is good to include Kizzmekia and Barney, but otherwise keep the cc list small.

It is great to see. We look forward to the (b) (4)

Best,  
Kaitlyn

---

**From:** "Chappell, Jim" (b) (6) >  
**Date:** Saturday, April 18, 2020 at 11:14 AM  
**To:** Kaitlyn Morabito <(b) (6)>  
**Cc:** "Stevens, Laura J" (b) (6) >  
**Subject:** Update: mRNA-1273 (b) (4)

Hi Kaitlyn.

The attached provides an early indication of mRNA-1273 (b) (4) These data are from one experiment. We received (b) (4), which Laura plans to begin next week, with results expected toward the weekend.

I share this information with you alone as instructed on our last conference call.

Thanks.

Jim

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 9 Apr 2020 14:56:06 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]; Morabito, Kaitlyn (NIH/VRC) [E]  
**Subject:** Fwd: VRC Senior Staff Meeting TODAY, 12-2PM  
**Attachments:** Senior Staff Meeting 09APR2020.pdf, ATT00001.htm

FYI. I feel like I need to be at PI meeting to sit on Bob. I've asked Tracy to be on enhanced disease call at noon and wondered how you two planned to split these up.

I'm going to be giving a webinar in a few minutes that replaces the cancelled World Vaccine Congress.

BG

Sent from my iPhone

Begin forwarded message:

**From:** "Austin, Sarah (NIH/NIAID) [E]" (b) (6)  
**Date:** April 9, 2020 at 10:49:51 AM EDT  
**Subject:** VRC Senior Staff Meeting TODAY, 12-2PM

*\*bcc function used due to large number of attendees\**

Please find attached the agenda for this afternoon's VRC Senior Staff meeting. Updated calendar notice to follow.

Meeting details are as follows:

**MEETING:** VRC SENIOR STAFF  
**DATE:** APRIL 9, 2020  
**LOCATION:** ZOOM  
**TIME:** 12:00PM – 2:00PM

**TELECONFERENCE:**

(b) (6)  
(b) (6)  
Meeting ID: (b) (6)

**Additional upcoming Senior Staff meeting dates are listed below (also listed on the agenda).**

- April 16, 2020
- April 23, 2020
- May 7, 2020
- May 14, 2020
- June 4, 2020 – Dr. Fauci will join
- June 11, 2020
- June 25, 2020

**2020 SAWG: ~~May 14-15, 2020~~ POSTPONED**

**2020 VRC Retreat: September 8-9, 2020**

**2020 BSC: December 15-16, 2020**

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 20 Mar 2020 13:49:06 +0000  
**To:** Austin, Sarah (NIH/NIAID) [E]  
**Cc:** Young, Monique (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: Info re: summer students

Last summer a very talented woman from Cornell (Anne Werner) worked with Kizzmekia for the summer on coronavirus projects. She had arranged to rejoin the lab in April to work on the coronavirus team as an post-bac IRTA. We have been counting on her because the other IRTAs on the team are leaving this spring. We need her in the lab.

We are also trying to hire a post-doc IRTA from a coronavirus lab in the Netherlands and we need help facilitating that hire as well. We will probably need to hire at least 2 more people who haven't been identified yet so please help us from being blocked.

Barney

---

**From:** Austin, Sarah (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, March 20, 2020 9:35 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Cc:** Young, Monique (NIH/VRC) [E] (b) (6)>  
**Subject:** Info re: summer students

Hi Barney – In yesterday's COVID-19 daily check-in discussion, you asked for clarification on bringing back summer students previously trained in coronavirus work. Would you mind providing a little more detail so I might forward this question to OITE for response? Specifically, if there were accepted or planned acceptance of candidates, could you let me know their names, as well as what work they would have been involved with in the lab?

Thank you!  
Sarah

**Sarah Austin, M.S.**  
*VRC Training Coordinator and  
Special Assistant to the Director*  
VRC/NIAID/NIH  
40 Convent Drive  
Building 40, Room 4504  
Bethesda, MD 20892  
(b) (6)

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 28 Mar 2020 21:51:32 +0000  
**To:** Lawrence Wright  
**Subject:** RE: Writer contacting you about me...

Not really. Typically, when you are reinfected with a respiratory virus the disease is more restricted to the upper airway and there is less disease because the lower airway is relatively protected.

I am not aware of any reports of "enhanced" coronavirus disease in humans and there are at least 4 endemic CoVs that circulate every year.

Barney

-----Original Message-----

From: Lawrence Wright (b) (6)  
Sent: Saturday, March 28, 2020 5:45 PM  
To: Graham, Barney (NIH/VRC) [E] (b) (6)>  
Subject: Re: Writer contacting you about me...

thanks, Barney. A quick question from my editor: does the phenomenon of disease enhancement through vaccine reflect on the possibility of reinfection or resemble it in any way?

> On Mar 28, 2020, at 4:41 PM, Graham, Barney (NIH/VRC) [E] (b) (6) wrote:

>

> Hi Larry,

>

> I forgot to send the RSV papers.

>

> Barney

>

>

>

> -----Original Message-----

> From: Lawrence Wright (b) (6)>

> Sent: Tuesday, March 24, 2020 3:25 PM

> To: Graham, Barney (NIH/VRC) [E] (b) (6)>

> Subject: Re: Writer contacting you about me...

>

> That'd be great, just call my landline if you will, whenever you're free.

>

> (b) (6)

>

>> On Mar 24, 2020, at 2:22 PM, Graham, Barney (NIH/VRC) [E] (b) (6) wrote:

>>

>> Thanks. Let's try to talk a little after 5:30.

>>

>> BG

>>

>>

>>

>>

>> Sent from my iPhone

>>

>>> On Mar 24, 2020, at 2:55 PM, Lawrence Wright <[REDACTED] (b) (6)> wrote:

>>>

>>> Barney, a writer for New York Magazine, Lila Shapiro, is writing a profile of me, and she wanted to contact you. Up to you if you talk to her, I just want you to be aware.

>>>

>>> Let's talk whenever you have a moment.

>>>

>>> Larry

>

> <DS-Cav1 Clinical trial VRC 317 Science 2019.pdf><RSV Review Immunity 2019.pdf><Structure=Based Vaccine Design 2019.pdf>

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 1 May 2020 14:05:19 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: [REDACTED] (b) (5) Samples

We should run [REDACTED] (b) (5)  
[REDACTED] That would be an easy paper and very informative.

BG

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] [REDACTED] (b) (6)>  
**Sent:** Friday, May 1, 2020 9:59 AM  
**To:** Doria-Rose, Nicole (NIH/NIAID) [E] [REDACTED] (b) (6)  
**Cc:** Graham, Barney (NIH/VRC) [E] [REDACTED] (b) (6)  
**Subject:** [REDACTED] (b) (5) Samples

Cynthia, one of the postbacs on the COVIP team, is running and [REDACTED] (b) (5)  
[REDACTED] (b) (5). I wonder if we should [REDACTED] (b) (5)  
[REDACTED] (b) (5) It would be good to [REDACTED] (b) (5)  
[REDACTED] (b) (5)

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
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Personal: [REDACTED] (b) (6)  
Fax: (301) 480-2771

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 8 Feb 2020 06:47:01 +0000  
**To:** Jason McLellan  
**Cc:** Daniel P. Wrapp;Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: New Manuscript Draft  
**Attachments:** WuCoV main\_text\_v3\_BG.docx

A few edits. It is well written and should be well received.

(b) (4)

BG

---

**From:** Jason McLellan (b) (6)  
**Sent:** Friday, February 7, 2020 3:20 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Cc:** Daniel P. Wrapp (b) (6)  
**Subject:** RE: New Manuscript Draft

Thanks Barney.

The award was great. They gave me a certificate before my talk and took some pictures. Jinelle was there and took some too. People seemed to really like the polymerase structure, and I met a lot of new people. The wine, manchego and jamon are excellent, of course😊

Thanks again for nominating me!  
Jason

---

**From:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Sent:** Friday, February 7, 2020 2:11 PM  
**To:** Jason McLellan (b) (6)  
**Cc:** Daniel P. Wrapp (b) (6) >  
**Subject:** RE: New Manuscript Draft

Thanks, It will be my top priority on the airplane tonight. We are trying to (b) (4).

How did the award ceremony go?

BG

---

**From:** Jason McLellan (b) (6) >  
**Sent:** Friday, February 7, 2020 3:06 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** Daniel P. Wrapp <(b) (6)>  
**Subject:** New Manuscript Draft

Hi Barney,

Attached is the next iteration of the CoV structure manuscript. We're trying to iterate daily for the next 3 days. Please send any edits/comments back as soon as possible.

Thanks  
Jason

---

Jason S. McLellan, Ph.D.  
Associate Professor  
Department of Molecular Biosciences  
The University of Texas at Austin  
4.320 Norman Hackerman Building  
100 E 24<sup>th</sup> St., Austin, TX 78712  
Tel. (b) (6)  
(b) (6)



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 23 Mar 2020 18:34:40 +0000  
**To:** Daucher, Marybeth (NIH/NIAID) [E]; Mascola, John (NIH/VRC) [E]; Harris, Christina (NIH/NIAID) [E]  
**Cc:** Bok, Karin (NIH/VRC) [E]  
**Subject:** RE: Please advise URGENT Approps question re NIAID COVID-19 supplemental language

I don't think [REDACTED] (b) (5).

Barney

---

**From:** Daucher, Marybeth (NIH/NIAID) [E] [REDACTED] (b) (6)>  
**Sent:** Monday, March 23, 2020 2:20 PM  
**To:** Mascola, John (NIH/VRC) [E] [REDACTED] (b) (6); Harris, Christina (NIH/NIAID) [E] [REDACTED] (b) (6)  
**Cc:** Graham, Barney (NIH/VRC) [E] [REDACTED] (b) (6); Bok, Karin (NIH/VRC) [E] [REDACTED] (b) (6)  
**Subject:** RE: Please advise URGENT Approps question re NIAID COVID-19 supplemental language

correct

---

**From:** Mascola, John (NIH/VRC) [E] [REDACTED] (b) (6)  
**Sent:** Monday, March 23, 2020 2:12 PM  
**To:** Daucher, Marybeth (NIH/NIAID) [E] [REDACTED] (b) (6)>; Harris, Christina (NIH/NIAID) [E] [REDACTED] (b) (6)  
**Cc:** Graham, Barney (NIH/VRC) [E] [REDACTED] (b) (6); Bok, Karin (NIH/VRC) [E] [REDACTED] (b) (6)>  
**Subject:** FW: Please advise URGENT Approps question re NIAID COVID-19 supplemental language

Confirming that highlighted language below is not from VRC – correct?

John

---

**From:** Selgrade, Sara (NIH/NIAID) [E] [REDACTED] (b) (6)  
**Sent:** Monday, March 23, 2020 1:55 PM  
**To:** Johnson, Martin S. (NIH/NIAID) [E] [REDACTED] (b) (6)>; Marston, Hilary (NIH/NIAID) [E] [REDACTED] (b) (6); NIAID OCGR Leg <[NIAIDOCGRLeg@mail.nih.gov](mailto:NIAIDOCGRLeg@mail.nih.gov)>; Eisinger, Robert (NIH/NIAID) [E] <[REDACTED] (b) (6)>; Lerner, Andrea (NIH/NIAID) [E] [REDACTED] (b) (6)  
Conrad, Patricia (NIH/NIAID) [E] [REDACTED] (b) (6); Mascola, John (NIH/VRC) [E] [REDACTED] (b) (6)>; Erbelding, Emily (NIH/NIAID) [E] <[REDACTED] (b) (6)>; Lane, Cliff (NIH/NIAID) [E] [REDACTED] (b) (6)>; Harper, Jill (NIH/NIAID) [E] [REDACTED] (b) (6); Auchincloss, Hugh (NIH/NIAID) [E] <[REDACTED] (b) (6)>; Billet, Courtney (NIH/NIAID) [E]

(b) (6)>; Folkers, Greg (NIH/NIAID) [E] <(b) (6)>  
**Subject:** RE: Please advise URGENT Approps question re NIAID COVID-19 supplemental language

Thanks Martin.

ASF has confirmed that this is not familiar to him. If anyone has any knowledge of such a proposal, please let me know ASAP.

I will ask NIH OLPA to check with other ICs and OD offices to make sure someone else at NIH had not put it forward.

Otherwise, we discussed a response along the lines of – this sounds like an interesting research proposal, but the NIAID supplemental COVID-19 funding request did not include plans for the project described below.

---

**From:** Johnson, Martin S. (NIH/NIAID) [E] (b) (6)>  
**Sent:** Monday, March 23, 2020 1:45 PM  
**To:** Selgrade, Sara (NIH/NIAID) [E] <(b) (6)>; Marston, Hilary (NIH/NIAID) [E] (b) (6); NIAID OCGR Leg <[NIAIDOCGRLeg@mail.nih.gov](mailto:NIAIDOCGRLeg@mail.nih.gov)>; Eisinger, Robert (NIH/NIAID) [E] (b) (6); Lerner, Andrea (NIH/NIAID) [E] (b) (6)  
**Subject:** RE: Please advise URGENT Approps question re NIAID COVID-19 supplemental language

FYI – When we were consolidating the (b) (5) request this never came up in any info. I received from the Divisions.

---

**From:** Selgrade, Sara (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, March 23, 2020 1:40 PM  
**To:** Fauci, Anthony (NIH/NIAID) [E] (b) (6)>  
**Cc:** Conrad, Patricia (NIH/NIAID) [E] (b) (6); Marston, Hilary (NIH/NIAID) [E] (b) (6)>; Mascola, John (NIH/VRC) [E] (b) (6); Lane, Cliff (NIH/NIAID) [E] (b) (6)>; Erbeling, Emily (NIH/NIAID) [E] (b) (6); Harper, Jill (NIH/NIAID) [E] (b) (6)>; Johnson, Martin S. (NIH/NIAID) [E] (b) (6)>; Auchincloss, Hugh (NIH/NIAID) [E] (b) (6)>; Folkers, Greg (NIH/NIAID) [E] (b) (6); NIAID OCGR Leg <[NIAIDOCGRLeg@mail.nih.gov](mailto:NIAIDOCGRLeg@mail.nih.gov)>  
**Subject:** Please advise URGENT Approps question re NIAID COVID-19 supplemental language  
**Importance:** High

Dr. Fauci,

We have had an urgent inquiry from Jen Cama, appropriations clerk for Rosa DeLauro, regarding the highlighted appropriations language below describing (b) (5) COVID-19 vaccine research. Jen asks “Can you please tell me if the following activity would be supported under the supp we’re currently working on? I have not seen this before, at least I don’t think so.”

You may recall Jen Cama has received the (b) (5) supplemental NIAID request that includes (b) (5) for additional COVID-19 research and (b) (5) to support critical research facilities.

Please let us know how would you like us to respond to Jen Cama regarding this [REDACTED] (b) (5)  
COVID-19 vaccine research.

Thank you,  
Sara

(b) (5)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 26 Mar 2020 18:10:59 +0000  
**To:** Hiatt, Nissa (NIH/VRC) [C]  
**Subject:** RE: Philip Ball, Prospect (Skype: philcball)

This was one of the better pieces in my opinion.

BG

---

**From:** Hiatt, Nissa (NIH/VRC) [C] (b) (6)  
**Sent:** Thursday, March 26, 2020 1:56 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Subject:** RE: Philip Ball, Prospect (Skype: philcball)

Thanks for sharing, Barney. We know that a paper will print what they want to print however, I think your comments give a great deal of crucial context to the pandemic and its response. Love the final line: "A problem anywhere is a problem everywhere."

Best,  
Nissa

**Nissa Hiatt**  
Communications  
Vaccine Research Center, NIAID, NIH  
40 Convent Drive, Bldg 40, Room 1100  
Bethesda, MD 20892  
Cell: (b) (6)  
Office: (b) (6)  
(b) (6)



---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Sent:** Thursday, March 26, 2020 10:03 AM  
**To:** Hiatt, Nissa (NIH/VRC) [C] (b) (6) >  
**Subject:** Fwd: Philip Ball, Prospect (Skype: philcball)

FYI.

BG

Sent from my iPhone

Begin forwarded message:

**From:** Philip Ball (b) (6)  
**Date:** March 25, 2020 at 11:32:23 AM EDT  
**To:** "Graham, Barney (NIH/VRC) [E]" (b) (6)  
**Subject:** Re: Philip Ball, Prospect (Skype: philcball)  
**Reply-To:** Philip Ball (b) (6)

Dear Barney,

Here is the final published piece. Thank you again so much for your help with this, which was absolutely essential.

<https://www.prospectmagazine.co.uk/science-and-technology/when-will-there-be-vaccine-coronavirus-progress>

Best wishes,  
Phil

On Sunday, 15 March 2020, 14:22:09 GMT, Graham, Barney (NIH/VRC) [E] (b) (6) wrote:

Thank you for sharing this. It is a very written article. One of the best I've seen. Will be very good for public education.

I made a few comments. I don't think its possible to give an entire immunology primer in an article like this, but I pointed out a few areas you may want to reconsider.

Barney

---

**From:** Philip Ball <(b) (6)>  
**Sent:** Friday, March 13, 2020 8:18 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Subject:** Re: Philip Ball, Prospect (Skype: philcball)

Dear Dr Graham,

I am immensely grateful to you for the time you gave to speaking with me about the coronavirus vaccine. I am hoping to speak with Mark Denison soon, and am seeking some comment from Moderna and Gilead, but my draft of the article is basically now done, and I am attaching it here. If you have time to take a look at it in the next week and let me know if there are any errors, I should be still further indebted to you. But of course I will understand too if you won't have the time for that.

Thanks again.

Best wishes,

Phil Ball

On Tuesday, 10 March 2020, 21:36:35 GMT, Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b) (6)> wrote:



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 16 Mar 2020 22:56:53 +0000  
**To:** Kathryn Westendorf  
**Cc:** Mascola, John (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; Ester Falconer; Payal Sipahimalani  
**Subject:** Re: Scatter plots  
**Attachments:** image.png, image.png

Thanks. It will be good to see where the best mAbs come from.

BG

Sent from my iPhone

> On Mar 16, 2020, at 6:18 PM, Kathryn Westendorf (b) (6) wrote:  
>  
>  
> Hi John,  
>  
> Thanks for the feedback today; I have attached the scatter plots (b) (5)  
> (b) (4). If this isn't the format you wanted to see, please let me know. I'm very curious to hear what  
> you guys think.  
>  
> <image.png>  
>  
> <image.png>  
>  
>  
> Thanks,  
>  
> Kathryn



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 6 Mar 2020 18:27:43 +0000  
**To:** Young, Monique (NIH/VRC) [E]  
**Subject:** FW: [-EXTERNAL-] RE: BIO Coronavirus Collaboration Initiative (BCCI)

FYI. Should probably block out the afternoon of March 12<sup>th</sup>.

BG

---

**From:** Phyllis Arthur <parthur@bio.org>  
**Sent:** Thursday, March 5, 2020 5:21 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** Mascola, John (NIH/VRC) [E] (b) (6); Erbelding, Emily (NIH/NIAID) [E] (b) (6); Cassetti, Cristina (NIH/NIAID) [E] (b) (6); Hannah Dorsey <hdorsey@bio.org>; Gregory Frank <gfrank@bio.org>  
**Subject:** RE: [-EXTERNAL-] RE: BIO Coronavirus Collaboration Initiative (BCCI)

Dr Graham you would be welcome in the afternoon as that is when we expect to have the deeper conversations on development of vaccines, therapeutics and diagnostics in there separate break out rooms. Please join us when you are available

Phyllis Arthur  
Vice President, Infectious Diseases & Diagnostics Policy  
BIO  
202-962-6664  
[parthur@bio.org](mailto:parthur@bio.org)

[2020 BIO International Convention](#) is June 8-11, 2020 in San Diego, CA

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Sent:** Thursday, March 5, 2020 4:13 AM  
**To:** Phyllis Arthur <[parthur@bio.org](mailto:parthur@bio.org)>  
**Cc:** Mascola, John (NIH/VRC) [E] (b) (6)>; Erbelding, Emily (NIH/NIAID) [E] (b) (6)>; Cassetti, Cristina (NIH/NIAID) [E] (b) (6)>; Hannah Dorsey <[hdorsey@bio.org](mailto:hdorsey@bio.org)>; Gregory Frank <[gfrank@bio.org](mailto:gfrank@bio.org)>  
**Subject:** Re: [-EXTERNAL-] RE: BIO Coronavirus Collaboration Initiative (BCCI)

I am committed on the 12th through 1pm to an international video call to work on the enhanced illness question. I could potentially go downtown after that.

Barney

Sent from my iPhone

On Mar 2, 2020, at 6:16 PM, Phyllis Arthur <[parthur@bio.org](mailto:parthur@bio.org)> wrote:

Dear John, thank you so much for expressing interest in our meeting. We think participation from the NIH is vital to a robust scientific conversation. We also sent an invitation directly to Dr Fauci and we would love to have him present to the group on the work of NIH if he is available. Is there someone specific in his office that I should reach out to? We look forward to hearing from you and the NIH team and seeing you at the meeting next week. Best regards,

Phyllis Arthur  
Vice President, Infectious Diseases & Diagnostics Policy  
BIO  
202-962-6664  
[parthur@bio.org](mailto:parthur@bio.org)

[2020 BIO International Convention](#) is June 8-11, 2020 in San Diego, CA

---

**From:** Mascola, John (NIH/VRC) [E] (b) (6)  
**Sent:** Monday, March 2, 2020 4:44 PM  
**To:** Hannah Dorsey <[hdorsey@bio.org](mailto:hdorsey@bio.org)>  
**Cc:** Graham, Barney (NIH/VRC) [E] (b) (6); Phyllis Arthur <[parthur@bio.org](mailto:parthur@bio.org)>; Erbelding, Emily (NIH/NIAID) [E] (b) (6); Cassetti, Cristina (NIH/NIAID) [E] (b) (6)  
**Subject:** [-EXTERNAL-] RE: BIO Coronavirus Collaboration Initiative (BCCI)

Thanks for the note.

Agree that USG/NIH representation would be useful here.

From NIH I have copied Barney Graham from our Vaccine Research Center/NIAID  
From the NIH funding side, Emily Erbelding and Christina Cassetti from the Division of Microbiology and Infectious Diseases (DMID), NIAID.

Look forward to learning more about the meeting.

John R. Mascola, M.D.  
Director, Vaccine Research Center

National Institute of Allergy and Infectious Diseases  
National Institutes of Health

---

**From:** Hannah Dorsey <[hdorsey@bio.org](mailto:hdorsey@bio.org)>  
**Sent:** Monday, March 2, 2020 4:31 PM  
**To:** Mascola, John (NIH/VRC) [E] (b) (6)  
**Subject:** BIO Coronavirus Collaboration Initiative (BCCI)

Dear John,

On behalf of BIO and our 1,000+ member companies, I invite you to participate in our multi-stakeholder COVID-19 medical countermeasures summit on March 12 in Washington, DC. We are hosting this summit in order to facilitate near-term collaboration among government, scientific, clinical, manufacturing, and related technological experts to help confront this growing and unpredictable public health crisis. If needed, we could discuss moving this tentative date to the following week in order to accommodate your participation.

Many BIO member companies, independently or as part of collaborations, are actively developing novel vaccines, diagnostics, treatments and services that can help respond to this virus; others are evaluating repurposing existing products approved for other indications.

Based on our member feedback, we anticipate CEOs and senior leaders from more than 40 companies will attend this targeted coronavirus summit, including many that have not yet engaged with the U.S. government. We also expect several global academic and public health thought leaders in virology and immunology will facilitate brainstorming novel ways to address this public health emergency.

The summit will include presentations from government, NGO and academic partners to ensure everyone is familiar with the latest epidemiologic developments related to COVID-19, the work that is already underway, and where the most critical gaps are in current R&D and response efforts. After these sessions, we will facilitate break-out sessions focused on vaccines, therapeutics and diagnostics to engage in short company presentations and scientific discussion. The summit will conclude with an opportunity to speak to press about opportunities for scientific advancement.

We believe the government should – indeed must – be a partner in these urgent efforts, and that it will be a valuable forum for all those in attendance as we collectively seek to accelerate progress to our common goal of safeguarding our society from this potentially devastating outbreak. Specifically, we are requesting the attendance of senior officials from the President's Coronavirus Task Force, representing the key agencies including CDC, ASPR, NIH, FDA, DOD.



I hope you will be able to participate in this important summit. BIO staff will follow up with your office to discuss your involvement. Please contact Phyllis Arthur, Vice President, Infectious Diseases and Diagnostics Policy ([parthur@bio.org](mailto:parthur@bio.org); 202-962-6664) with any questions. Additionally, the agenda will follow. Thank you for your consideration of this time-sensitive request.

Jim Greenwood



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 28 Feb 2020 16:00:59 +0000  
**To:** Jason McLellan; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: Proofs?

It is in the abstract once and once in the intro text. Since we also stabilized an alpha (229e) I think we could just go with coronavirus everywhere. But this is a nuance that doesn't matter to me. Could go either way.

BG

---

**From:** Jason McLellan (b) (6) >  
**Sent:** Friday, February 28, 2020 10:58 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6) >; Corbett, Kizzmekia (NIH/VRC) [E]  
(b) (6)  
**Subject:** RE: Proofs?

Hi Barney,

Are you referring to the abstract where we call it a betacoronavirus? Do you prefer to just call it a coronavirus there?

Jason

---

**From:** Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Sent:** Friday, February 28, 2020 9:50 AM  
**To:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >; Jason McLellan  
(b) (6)  
**Subject:** RE: Proofs?

I've looked through it. Only minor question is whether we were going to say "betacoronavirus" or just "coronavirus". We can reconsider the name change for the print addition. I like the Chinese suggestion for hCoV-19.

BG

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] (b) (6) >  
**Sent:** Friday, February 28, 2020 10:40 AM  
**To:** Jason McLellan (b) (6) >; Graham, Barney (NIH/VRC) [E]  
(b) (6) >  
**Subject:** Re: Proofs?

I only looked at the figures, to be honest. I didn't find any errors at all.

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center

National Institutes of Allergy and Infectious Diseases

National Institutes of Health

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892

Laboratory: (b) (6)

Personal: (b) (6)

Fax: (301) 480-2771

---

**From:** Jason McLellan (b) (6) >

**Date:** Friday, February 28, 2020 at 10:19 AM

**To:** Barney Graham (b) (6) >, Kizzmekia Corbett (b) (6)

**Subject:** Proofs?

Hi Barney and Kizzie,

Do you have any feedback on the proofs? Daniel, Jory and I have combed through them and can't find a single error. I'd like to give Science the green light to move forward in the next few hours.

Thanks

Jason

---

Jason S. McLellan, Ph.D.

Associate Professor

Department of Molecular Biosciences

The University of Texas at Austin

4.320 Norman Hackerman Building

100 E 24<sup>th</sup> St., Austin, TX 78712

Tel. (b) (6)

(b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 21 Apr 2020 18:06:00 +0000  
**To:** Roberts, Jacqueline (NIH/OD) [E]  
**Cc:** Wanjek, Christopher (NIH/OD) [E]  
**Subject:** Re: Your COVID-19 talk on Wednesday  
**Attachments:** image001.png

A little late getting off current call.

BG

Sent from my iPhone

On Apr 21, 2020, at 12:04 PM, Roberts, Jacqueline (NIH/OD) [E] <(b) (6)> wrote:

Thank you for sending. You should have an Outlook calendar invite for today's WebEx test at 2:00 pm.

Jackie

---

**From:** "Graham, Barney (NIH/VRC) [E]" <(b) (6)>  
**Date:** Monday, April 20, 2020 at 5:53 PM  
**To:** "Roberts, Jacqueline (NIH/OD) [E]" <(b) (6)>  
**Cc:** "Wanjek, Christopher (NIH/OD) [E]" <(b) (6)>, "Gottesman, Michael (NIH/OD) [E]" <(b) (6)>  
**Subject:** RE: Your COVID-19 talk on Wednesday

See below...

---

**From:** Roberts, Jacqueline (NIH/OD) [E] <(b) (6)>  
**Sent:** Monday, April 20, 2020 5:21 PM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Cc:** Wanjek, Christopher (NIH/OD) [E] <(b) (6)>; Gottesman, Michael (NIH/OD) [E] <(b) (6)>  
**Subject:** Your COVID-19 talk on Wednesday

Dear Dr. Graham,

We are looking forward to your lecture on Wednesday. There are a few additional items that I need from you in order to finalize the planning of the event.

1. Do you have time tomorrow, Tuesday, April 21 for a 15 minute WebEx test? If so, please let me know your preferred time.

Looks like 2PM could work.

2. Can you please send me your CV? Steve Holland is planning to introduce you at the talk.

CV attached, but also a brief bio. He doesn't need to say too much.

3. We're planning to offer CME credit at your lecture. Can you please submit your disclosure online? Instructions below at the bottom of my message.

OK, will do.

Thanks so much,  
Jackie

Jacqueline Roberts  
Office of Intramural Research

**Complete your disclosure online on Hopkins Cloud CME (JHU manages our CME program).**

Go to the Hopkins CloudCME website at: <https://hopkinscme.cloud-cme.com/aph.aspx>

- If you have an account, sign in with your user name and password (top left of screenshot) scroll down to the bottom of the page, **click the blue disclosure button**
- If you do not have an account, click the Sign Up button (yellow) and once signed up, follow the steps above
- If you need help contact [cmetechnsupport@jhmi.edu](mailto:cmetechnsupport@jhmi.edu)

<image001.png>

---

**From:** "Roberts, Jacqueline (NIH/OD) [E]" <[REDACTED]> (b) (6)

**Date:** Thursday, April 16, 2020 at 4:32 PM

**To:** "Graham, Barney (NIH/VRC) [E]" <[REDACTED]> (b) (6)

**Subject:** Your COVID-19 Lecture Series talk next week

Dear Dr. Graham,

I'm helping with some of the logistics for your COVID-19 lecture next week. I have your lecture title and I'm wondering if you can send me a short lecture summary.

Also, we need to set up a time on Tuesday, April 21 to test the WebEx and videocast stream. What time works best for you? We can be completely flexible.

Thanks so much,  
Jackie

---

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 15 Mar 2020 19:51:27 +0000  
**To:** Mascola, John (NIH/VRC) [E]; Gall, Jason (NIH/VRC) [C]  
**Cc:** Bok, Karin (NIH/VRC) [E]  
**Subject:** Fwd: Barney please share your coronavirus (b) (4)  
(b) (4) data with Lynda

FYI. Any thoughts here?

If Gates is going to act then maybe we will support.

BG

Sent from my iPhone

Begin forwarded message:

**From:** Lynda Stuart (b) (6)  
**Date:** March 15, 2020 at 3:41:23 PM EDT  
**To:** "Graham, Barney (NIH/VRC) [E]" (b) (6)>  
**Cc:** Neil King (b) (6)>, Lance Stewart (b) (6)>, Harry Kleanthous (b) (6)"Corbett, Kizzmekia (NIH/VRC) [E]" (b) (6)>, "Hutchinson, Geoffrey (NIH/VRC) [F]" (b) (6)>, David Baker (b) (6)>  
**Subject: Re: Barney please share your coronavirus** (b) (4)  
(b) (4) data with Lynda

Hi Barney

Yes it would be nice to see the data. Very happy to just look at it myself or to work with Kizzy and Geoff as I can imagine how busy you are.

To clarify why: (b) (4)  
(b) (4)

Let us know what works best for you.

Lynda

Sent from my iPhone



On Mar 15, 2020, at 8:20 AM, Graham, Barney (NIH/VRC) [E] <[REDACTED]> (b) (6) wrote:

Hi Lynda,

I obviously haven't been able to keep up the last few days. Working my way down the list.

We have been actively been working on [REDACTED] (b) (4)  
[REDACTED] (b) (4)

We can put together a [REDACTED] (b) (4)  
[REDACTED] (b) (4)

Will discuss with Neil and Kizzy and Geoff.

Best wishes,

Barney

-----Original Message-----

From: Lynda Stuart <[REDACTED]> (b) (6)>

Sent: Wednesday, March 11, 2020 12:30 PM

To: Graham, Barney (NIH/VRC) [E] [REDACTED] (b) (6)>

Cc: Neil King [REDACTED] (b) (6); Lance Stewart [REDACTED] (b) (6)>; Harry Kleanthous  
[REDACTED] (b) (6)>; David Baker [REDACTED] (b) (6)>

Subject: Re: Barney please share your coronavirus [REDACTED] (b) (4)  
data with Lynda

Hi Barney

Maybe a bit more granularity. As we have discussed we are interested in moving the [REDACTED] (b) (4).  
[REDACTED] (b) (4)

but have not yet actually seen it from either you or Neil.

Thanks again,  
Lynda

Sent from my iPhone

On Mar 11, 2020, at 9:12 AM, David Baker (b) (6) wrote:

BMGF is moving towards (b) (4)

-so sooner would be better! Thanks, David

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 31 Mar 2020 18:58:10 +0000  
**To:** Jason McLellan  
**Subject:** Re: (b) (4), (b) (3) (A), (b) (6)

I had no idea.

How about 3:30 your time 4:30 my time.

BG

Sent from my iPhone

On Mar 31, 2020, at 1:30 PM, Jason McLellan (b) (6) wrote:

Hi Barney,

Do you have a few minutes sometime this week so we can chat about (b) (4), (b) (3) (A), (b) (6)  
(b) (4), (b) (3) (A), (b) (6)

Thanks  
Jason

---

Jason S. McLellan, Ph.D.  
Associate Professor  
Department of Molecular Biosciences  
The University of Texas at Austin  
4.320 Norman Hackerman Building  
100 E 24<sup>th</sup> St., Austin, TX 78712  
Tel. (b) (6)  
(b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 25 Feb 2020 18:53:18 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]; Holtzman, Michael  
**Cc:** Agapov, Eugene; Zhang, Yong  
**Subject:** RE: CoV-2 data

.... and we don't have the virus at the VRC. Another person who may be able to share RNA is Mark Denison at Vanderbilt.

Best wishes,

Barney

---

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>  
**Sent:** Tuesday, February 25, 2020 1:09 PM  
**To:** Holtzman, Michael <(b) (6)>; Graham, Barney (NIH/VRC) [E]  
<(b) (6)>  
**Cc:** Agapov, Eugene <(b) (6)>; Zhang, Yong <(b) (6)>  
**Subject:** Re: CoV-2 data

Good afternoon Mike,  
This is good news. I'm replying with my suggestions **in line** below:

Also on an aside, I sent Chris Karp (keystone SAG, Gates) your way for some (b) (4)  
(b) (4) he's interested in. If he reaches out it, it is not out of  
left field. I sent several other suggestions too, so he may not.

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive  
Bethesda MD 20892  
Laboratory: (b) (6)  
Personal: (b) (6)  
Fax: (301) 480-2771

---

**From:** "Holtzman, Michael" (b) (6)  
**Date:** Tuesday, February 25, 2020 at 12:56 PM  
**To:** Barney Graham (b) (6), Kizzmekia Corbett (b) (6)  
**Cc:** "Agapov, Eugene" (b) (6), "Zhang, Yong" (b) (6)  
**Subject:** CoV-2 data

Barney and Kizzmekia,  
Our data looks like we may have cracked the code on (b) (4)  
Would be great to get (b) (4)  
(b) (4)

But given the (b) (4) we'd like to take (b) (4)  
(b) (4) if you haven't already.

So.....is it possible to (b) (4)  
(b) (4)

I would try (b) (4)  
(b) (4)  
(b) (4)

We also have (b) (4)  
(b) (4) but I will check and double back here.

Or if someone has (b) (4)  
(b) (4) even better.  
Thanks for considering this.  
(b) (4)  
(b) (4) but this would be the place to go.

I'm sure you're deluged at this point, but we might have something unusual here.  
All the best,  
Mike

Copied here is our virologist Eugene Agapov and molecular biologist Yong Zhang.

---

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**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 22:40:30 +0000  
**To:** (b) (6)  
**Subject:** RE: ADVAC alumni meeting during SAGE at end of March

Hi Phil,

I don't know about a Geneva meeting on COVID-19 on March 31<sup>st</sup>, unless I missed it which is very possible in these days. Either way we can probably work something out online.

Best wishes,

Barney

---

**From:** (b) (6)  
**Sent:** Monday, March 9, 2020 10:31 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Subject:** RE: ADVAC alumni meeting during SAGE at end of March

Thanjks. Will you still be in Geneva on the 31<sup>st</sup> of March?;

Phil

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**De :** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Envoyé :** lundi 9 mars 2020 14:31  
**À :** (b) (6)  
**Objet :** Re: ADVAC alumni meeting during SAGE at end of March

A lot of meetings have been canceled or converted to web-based meetings. I could work something out for the ADVAC alumni if you can figure out a system with enough band width.

Barney

Sent from my iPhone

On Mar 9, 2020, at 4:34 AM, (b) (6)> wrote:

Dear Barney,



As it goes I just learnt that the March-April SAGE meeting will turn into a virtual meeting only due to the Covid-19 situation. As a result we will cancel the in person alumni meeting. We would, however, like to keep a webcasted ADVAC alumni conference on the same topic. Are you still travelling to Geneva? I assume so for a Covid-19 meeting? Would you still be prepared to present in by tele or video conference to ADVAC alumni? Kindly confirm that the time slot would still work for you i.e. 13:00 or 14:00 Geneva time for a 1 to 1.5 hour session. You could still present for 15-20 min and Melanie Saville from CEPI could present on the vaccine development platform also and then we could have a brief questions/discussion session. As it turned out Melanie could not have travelled to Geneva as the entire team there is grounded but she is willing to also present via TC.

With thanks and kind regards,

Philippe

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**De :** Graham, Barney (NIH/VRC) [E] (b) (6) >

**Envoyé :** mardi 25 février 2020 13:25

**À :** (b) (6)

**Objet :** Re: ADVAC alumni meeting during SAGE at end of March

Thank you for asking again. I missed the first email. I am planning to be there for SAGE and would be glad to give a talk to the ADVAC alumni. We have made rapid progress because of our prior work on MERS and HKU1.

I look forward for seeing you there.

Barney

Sent from my iPhone

On Feb 25, 2020, at 4:09 AM, "(b) (6)" > wrote:

Dear Barney,

As time is running and I have not heard back from you I take the liberty to resend my mail below.

With kind regards,

Philippe

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**De :** (b) (6)

**Envoyé :** mercredi 19 février 2020 15:51

À : [REDACTED] (b) (6)

**Objet :** ADVAC alumni meeting during SAGE at end of March

Hello Barney,

I hope that you are doing well. I heard from Paul-Henri that you may be coming to the SAGE meeting this spring and staying for a corona specific meeting. We are in the process of planning an ADVAC alumni meeting on the first day of SAGE i.e. on Tuesday March 31<sup>st</sup> at lunch time.

The topic selected is that of Vaccine Development platforms: application to coronavirus (progress and challenges!)

If you are indeed planning to be around would you kindly accept to join for the ADVAC alumni meeting and deliver a brief presentation on the above mentioned topic to stimulate a debate? You could focus more on the progress and challenges and we could ask Melanie Saville to also attend and talk more about the vaccine development platforms.

With kindest regards,

Philippe

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Fri, 24 Jan 2020 14:48:28 +0000  
**To:** Kibunja, Julia (OS/OGA)  
**Subject:** Accepted: WHO-USG Teleconference on Wuhan Coronavirus Cooperation

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sat, 14 Mar 2020 12:28:41 +0000  
**To:** Zimmerberg, Joshua (NIH/NICHD) [E]  
**Cc:** Duffy, Patrick (NIH/NIAID) [E]; Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** RE: Coronavirus VLP

Hi Joshua,

Sorry for my delayed response. I am not keeping up.

We have an active program in CoV vaccine development and are expressing a stabilized full-length Spike trimer with mRNA. We have not tried to make VLPs, but that would be a valid vaccine approach and if you can do this, we could provide some limited amounts of spike protein (or plasmid). I've copied Dr. Corbett who is leading this project and can help with this if you are interested.

Barney

---

**From:** Zimmerberg, Joshua (NIH/NICHD) [E] (b) (6) >  
**Sent:** Friday, March 13, 2020 3:14 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)  
**Cc:** Duffy, Patrick (NIH/NIAID) [E] (b) (6) >  
**Subject:** Coronavirus VLP

Hi Dr. Graham,

Thank you very much, I apologize again for bugging you at inopportune times.

I am an Associate Scientific Director in the NICHD who works on viral envelopes. In particular, I showed a while back (attached) that the influenza virus' envelope had a temperature dependence to its viscosity, leading to an hypothesis about a potential correlation to temperature-dependent transmission seen in animal models (<https://www.nih.gov/news-events/news-releases/nih-scientists-offer-explanation-winter-flu-season>).

A number of people have suggested that I now repeat this study with the SARS-CoV-2 coronavirus (or a VLP thereof with the same glycoproteins, or if needs be any corona virus). I have the resources and machines lined up to make these measurements, and I now am trying to get sufficient membrane. This can be from intact inactivated virus, VLP, or just a lipid extract of the virus. Since there are no other lipids in the virus, the lipid extract of the virus is the same as the lipid extract of its envelope.

I called Patrick to see if he knew of anyone working on Corona viruses at the NIH, and he said "no, but please check with Barney". Hence my email!

I think anyone making a vaccine with VLP or growing virus for protein purification might have lipids to spare. I would also be happy to collaborate or pay for a contract. Anything to accelerate this work.

Thank you,

Joshua Zimmerberg, MD, PhD  
Senior Investigator, Section Chief, Associate Scientific Director  
*Eunice Kennedy Shriver* National Institute of Child Health and Human Development  
National Institutes of Health, Bethesda MD 20892  
Tel: (b) (6)  
Fax: 301-594-0813  
(b) (6)

Joshua Zimmerberg, MD, PhD  
Senior Investigator, Section Chief, Associate Scientific Director  
*Eunice Kennedy Shriver* National Institute of Child Health and Human Development  
National Institutes of Health, Bethesda MD 20892  
Tel: (b) (6)  
Fax: 301-594-0813  
(b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 25 Feb 2020 14:46:42 +0000  
**To:** Corbett, Kizzmekia (NIH/VRC) [E]  
**Subject:** Re: Request - Interest in Collaboration with Thailand

I think this should be referred to Moderna or DMID so they could be a potential participant in clinical trials.

BG

Sent from my iPhone

On Feb 25, 2020, at 9:29 AM, Corbett, Kizzmekia (NIH/VRC) [E]  
(b) (6) wrote:

Putting this on your list of things to answer. It's above me.

--

**Kizzmekia S. Corbett, PhD**  
**Senior Research Fellow | Scientific Lead**  
**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**  
Viral Pathogenesis Laboratory | Vaccine Research Center  
National Institutes of Allergy and Infectious Diseases  
National Institutes of Health

Building 40 Room 2608  
40 Convent Drive  
Bethesda MD 20892  
Laboratory: (b) (6)  
Personal: (b) (6)  
Fax: (301) 480-2771

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**From:** "Bushar, Nicholas (NIH/NIAID) [E]" (b) (6) >  
**Date:** Monday, February 24, 2020 at 4:15 PM  
**To:** VRC\_CoV <VRC\_CoV@mail.nih.gov>  
**Cc:** "Marston, Hilary (NIH/NIAID) [E]" (b) (6)  
**Subject:** FW: Request - Interest in Collaboration with Thailand

VRC colleagues –

FYI below. Apologies – meant to loop the whole group in the first time!



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**From:** Bushar, Nicholas (NIH/NIAID) [E]  
**Sent:** Monday, February 24, 2020 3:40 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6); Schmaljohn, Connie (NIH/NIAID) [E] (b) (6); De wit, Emmie (NIH/NIAID) [E] (b) (6); Munster, Vincent (NIH/NIAID) [E] (b) (6)  
**Cc:** Marston, Hilary (NIH/NIAID) [E] (b) (6)  
**Subject:** Request - Interest in Collaboration with Thailand

Connie, Vincent, Emmie, and Barney –

We received the email below regarding interest from the Thai National Vaccine Institute and Ministry of Public Health to collaborate with NIAID on COVID-19.

If you could let us know if you have interest in a specific project to collaborate with them (and, if so, some details on the project) we'd greatly appreciate it.

We are looking to get back to them ASAP, so if you could let us know as soon as you can, we'd greatly appreciate that as well.

Thanks,  
Nick

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**From:** Handley, Gray (NIH/NIAID) [E] (b) (6)>  
**Sent:** Monday, February 24, 2020 7:11 AM  
**To:** Marston, Hilary (NIH/NIAID) [E] <(b) (6)>  
**Cc:** Bernabe, Gayle (NIH/NIAID) [E] (b) (6); Dominique, Joyelle (NIH/NIAID) [E] (b) (6); Lane, Cliff (NIH/NIAID) [E] (b) (6); Bushar, Nicholas (NIH/NIAID) [E] (b) (6)>  
**Subject:** RE: THAILAND: 2019 NOVEL CORONAVIRUS RESEARCH

No problem. We had a very promising meeting with the head of their National Vaccine Institute (Dr. Nakorn Prem Sri) and the leader of the field studies area at the Department of Disease Control, Ministry of Public Health. Both visited NIAID and the VRC last year. Prem Sri is now tasked with overseeing the whole COVID-19 response, particularly the R&D component.

I will write up more detailed notes from the conversation, but in a nutshell, they will share information on the COVID projects they have recently funded to see if we want to join forces on any of them and they would like to hear from us what specifically we would want to do with them.

(b) (5)

Feel free to share this information with others so we can gage level of interest on our side (intramural and extramural) and hopefully hear any specific thoughts on areas of particular promise for work with and in Thailand.

I've copied Gayle who also was at the meeting to add anything she has in her notes that I might have forgotten.

Thanks. Gray

---

**From:** Marston, Hilary (NIH/NIAID) [E] <(b) (6)>  
**Sent:** Monday, February 24, 2020 6:38 AM  
**To:** Handley, Gray (NIH/NIAID) [E] <(b) (6)>  
**Subject:** Re: THAILAND: 2019 NOVEL CORONAVIRUS RESEARCH

We did an international round robin but ran out of time and Thailand was not raised. Sorry about this. However Jess is there with you and I imagine would be eager to collaborate. I can ask Barney, Connie and Vincent.

On Feb 24, 2020, at 1:31 AM, Handley, Gray (NIH/NIAID) [E] <(b) (6)> wrote:

The Thais have reached out to me and are eager to collaborate. I meet them this afternoon for details. If

(b) (5)

Thanks. Gray

Sent from my iPhone

On Feb 22, 2020, at 12:27 AM, Ranjan, Mukul (NIH/NIAID) [E] (b) (6)> wrote:

CDC heard back from them and they are willing to modify their MTA to something we can accept.

---

**From:** Handley, Gray (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, February 21, 2020 11:38 AM  
**To:** Ranjan, Mukul (NIH/NIAID) [E] (b) (6)  
**Cc:** Marston, Hilary (NIH/NIAID) [E] (b) (6); Bernabe, Gayle (NIH/NIAID) [E] (b) (6); Dominique, Joyelle (NIH/NIAID) [E] (b) (6) Bushar, Nicholas (NIH/NIAID) [E] (b) (6)  
**Subject:** Re: THAILAND: 2019 NOVEL CORONAVIRUS RESEARCH

It may have. What is that positive news?

Sent from my iPhone

On Feb 21, 2020, at 9:44 AM, Ranjan, Mukul (NIH/NIAID) [E] <(b) (6)> wrote:

Yes, I was planning to. There is some positive news and I was curious if our out reach had played a role.

---

**From:** Marston, Hilary (NIH/NIAID) [E] (b) (6)>  
**Sent:** Friday, February 21, 2020 9:31 AM  
**To:** Handley, Gray (NIH/NIAID) [E] (b) (6)  
**Cc:** Ranjan, Mukul (NIH/NIAID) [E] <(b) (6)>; Bernabe, Gayle (NIH/NIAID) [E] (b) (6); Dominique, Joyelle (NIH/NIAID) [E] (b) (6)>; Bushar, Nicholas (NIH/NIAID) [E] (b) (6)>  
**Subject:** Re: THAILAND: 2019 NOVEL CORONAVIRUS RESEARCH

Let's bring this up at the SWAT today

On Feb 21, 2020, at 9:11 AM, Handley, Gray (NIH/NIAID) [E] <(b) (6)> wrote:

No, but I fly there today so send me instructions and I will follow up in person. Would be good to be updated about any contacts Divisions have had and what we would most like to pursue with Thai scientists. Thanks. G

Sent from my iPhone

On Feb 21, 2020, at 8:29 AM, Ranjan, Mukul (NIH/NIAID) [E] (b) (6) wrote:

Hello Gray,

Did you ever hear back from anyone from Thailand?

Mukul

---

**From:** Handley, Gray (NIH/NIAID) [E] (b) (6)>  
**Sent:** Thursday, February 6, 2020 12:57 PM  
**To:** MacArthur, John R. (CDC/DDPHSIS/CGH/DGHP) (b) (6)>  
**Cc:** Ranjan, Mukul (NIH/NIAID) [E] (b) (6); Marston, Hilary (NIH/NIAID) [E] (b) (6)>; Bernabe, Gayle (NIH/NIAID) [E] (b) (6)>; Dominique, Joyelle (NIH/NIAID) [E] (b) (6)>; Bushar, Nicholas (NIH/NIAID) [E] (b) (6)  
**Subject:** RE: THAILAND: 2019 NOVEL CORONAVIRUS RESEARCH

Dear John, Sorry for the delay in my response but I needed to check on this with program office.

(b) (5)

(b) (4)

I have attached below this message the text of a NOSI that was issued this morning. It will provide competitive awards to current grantees so I hope Eileen, Carlos, and their colleagues will submit applications quickly.

(b) (5)

You will be hearing from Gayle soon about a suggested text to invite the Ambassador to the EID opening.

Looking forward to seeing you soon.

Gray

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**Notice of Special Interest (NOSI) regarding the Availability of Urgent Competitive Revisions for Research on the 2019 Novel Coronavirus (2019-nCoV)**

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Notice Number: NOT-AI-20-030

Key Dates

**Release Date:** February 6, 2020



**First Available Due Date:** February 6, 2020

**Expiration Date:** February 6, 2021

Related Announcements

[PA-18-935](#) Urgent Competitive Revision to Existing NIH Grants and Cooperative Agreements (Urgent Supplement - Clinical Trial Optional)

Issued by

National Institute of Allergy and Infectious Diseases ([NIAID](#))

National Institute of General Medical Sciences ([NIGMS](#))

Purpose

NIAID and NIGMS are issuing this Notice of Special Interest (NOSI) to highlight the urgent need for research on the 2019 novel Coronavirus (2019-nCoV). NIAID is particularly interested in projects focusing on viral natural history, pathogenicity, transmission, as well as projects developing medical countermeasures and suitable animal models for pre-clinical testing of vaccines and therapeutics against 2019-nCoV.

NIGMS is specifically interested in incorporation of data from the 2019-nCoV into ongoing research efforts to develop predictive models for the spread of Coronaviruses and related pathogens.

NIAID and NIGMS are therefore offering Competitive Revisions to active grants addressing research objectives described below.

### **Background**

Coronaviruses are a diverse family of viruses that cause a range of disease in humans and animals, and there are currently no approved coronavirus vaccines or therapeutics. In January 2020, a novel coronavirus, 2019-nCoV, was identified as the causative agent of an outbreak of viral pneumonia centered around Wuhan, China. Current information regarding confirmed cases is changing daily and can be found on the Centers for Disease Control and Prevention website

(<https://www.cdc.gov/coronavirus/index.html>) and through other sources. Transmission characteristics and the associated morbidity and mortality are not completely understood, but there is clear evidence of human-to-human transmission. Many other aspects of viral pathogenesis, natural history, and host range are poorly understood. Given this, there is an urgent public health need to better understand the 2019-nCoV, particularly to improve understanding of fundamental virology, immunology, and the development of animal models and medical countermeasures.

### **Research Objectives**

In order to rapidly improve our understanding and available control measures for 2019-nCoV, NIAID is encouraging the submission of applications for Competitive Revisions to active grants to address the following research areas of interest:

- Studies to identify optimal 2019-nCoV *in vitro* culture requirements and conditions;
- Development of reagents and assays for virus characterization;
- Studies to understand critical aspects of viral infection, replication, pathogenesis, and transmission;
- Studies to identify viral epitopes critical for binding neutralization;
- Studies to examine virus stability and persistence;
- Production of molecular clones of 2019-nCoV, reporter viruses and recombinant viral proteins;
- Development of animal models of 2019-nCoV infection suitable for screening vaccine and therapeutic candidates and/or pathogenesis studies;
- Studies on the evolution and emergence of 2019-nCoV viruses including the identification of factors that affect viral host-range and virulence;

- Virologic and serologic surveillance studies of the distribution and natural history of 2019-nCoV viruses in animal populations and in humans at the human/animal interface with particular emphasis on host reservoirs and understanding cross-species transmission events;
- Development of sensitive, specific, and rapid clinical diagnostic tests for 2019-nCoV;
- Development of 2019-nCoV therapeutic candidates; broad-spectrum therapeutics against multiple coronavirus strains; examination of 2019-nCoV antiviral activity of existing or candidate therapeutics initially developed for other indications;
- Identification and evaluation of the innate, cellular and humoral immune responses to 2019-nCoV infection and/or candidate vaccines, including, but not limited to: cross-reactive antibodies from individuals exposed to 2019-nCoV and other coronaviruses; viral epitopes critical for antibody binding and neutralization; immune-mediated pathology or host factors that might predispose to severe infection; and
- Development of 2019-nCoV vaccine candidates that include emerging antigen design strategies, novel platforms or delivery approaches, adjuvants, or assessing cross-neutralization potential of SARS-CoV vaccine candidates.

#### NIGMS Interests

- Incorporation of data related to the 2019-nCoV into ongoing research efforts to develop predictive models for the spread of coronaviruses and related infectious agents.

#### Application and Submission Information

Applications in response to this NOSI must be submitted using the following targeted funding opportunity:

- [PA-18-935](#) Urgent Competitive Revision to Existing NIH Grants and Cooperative Agreements (Urgent Supplement - Clinical Trial Optional), which is intended to provide funds for NIH grantees applying to expand the scope of their active grant. Further details can be found here: <https://www.niaid.nih.gov/grants-contracts/urgent-award-mechanism..>
- The funding instrument, or activity code, will be the same as the parent award.
- **Please note:** NOT-AI-20-030 is specific for [PA-18-935](#). NIH grantees seeking additional funds for research responsive to the 2019-nCoV outbreak that falls within the scope of an ongoing grant should instead apply for an administrative supplement under NIH PA-18-591, [Administrative Supplements to Existing NIH Grants and Cooperative Agreements](#) FOA (<https://grants.nih.gov/grants/guide/pa-files/PA-18-591.html>).

When developing applications in response to this NOSI, all instructions in the [SF424 \(R&R\) Application Guide](#) and [PA-18-935](#) must be followed, with the following additions:

- The Research Strategy section of the application is limited to 6 pages.
- The award project period of the Competitive Revision must not exceed two years.
- Application budgets are limited to no more than the amount of the current parent award, and must reflect the actual needs of the proposed project.
- The parent award must be active when the application is submitted. The project and budget periods must be within the currently approved project period for the existing parent award.
- Applications will be accepted on a rolling basis **from February 6, 2020 through February 6, 2021 by 5:00 PM local time** of the applicant organization. This NOSI expires on February 6, 2021. An application submitted in response to this NOSI that is received on February 6, 2021 or later, will be withdrawn.



- Applications must be submitted to [PA-18-935](#), "Urgent Competitive Revision to Existing NIH Grants and Cooperative Agreements (Urgent Supplement – Clinical Trial Optional)" and must use the application form package with the Competition ID of "NOT-AI-20-030-FORMS-E"
- **IMPORTANT:** For funding consideration, all applicants must designate "**NOT-AI-20-030**" (without quotation marks) in the Agency Routing Identifier field (Box 4b) of the SF424 (R&R) Form. **Applications without this information in Box 4b will not be considered for this initiative.**
- Investigators planning to submit an application in response to the NOSI are strongly encouraged to contact the program officers listed below to discuss the proposed project in the context of the parent award.

Although NIGMS is not listed as a Participating Organization in all the FOAs listed above, applications for this initiative will be accepted.

Applications nonresponsive to terms of this NOSI will be withdrawn from consideration for this initiative.

#### Inquiries

Please direct all inquiries to the contacts in Section VII of the listed funding opportunity announcements with the following additions/substitutions:

##### **Scientific/Research Contact(s)**

Erik J. Stemmy, Ph.D.

Respiratory Diseases Branch

National Institute of Allergy and Infectious Diseases (NIAID)

Telephone: (b) (6)

Email: (b) (6)

Wolfgang Leitner, Ph.D.

Basic Immunology Branch

National Institute of Allergy and Infectious Diseases (NIAID)

Telephone: (b) (6)

Email: (b) (6)

Daniel E. Janes, Ph.D.

National Institute of General Medical Sciences (NIGMS)

Email: (b) (6)

##### **Financial/Grants Management Contact(s)**

Donna R. Sullivan

National Institute of Allergy and Infectious Diseases (NIAID)

Telephone: (b) (6)

Email: (b) (6)

Vandhana Khurana

National Institute of Allergy and Infectious Diseases (NIAID)

Telephone: (b) (6)

Email: (b) (6)

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**From:** MacArthur, John R. (CDC/DDPHSIS/CGH/DGHP) <[REDACTED] (b) (6)>

**Sent:** Sunday, February 2, 2020 9:23 AM

**To:** Handley, Gray (NIH/NIAID) [E] [REDACTED] (b) (6)

**Subject:** THAILAND: 2019 NOVEL CORONAVIRUS RESEARCH

Gray,

Greetings from Thailand. We are looking forward to your arrival in a few weeks. I wanted to contact you regarding the cable below. I am sure you are aware that Thailand detected the first case of 2019-nCoV outside of China in a tourist visiting from Wuhan and since then continues to see more cases including a human-to-human transmission. Approximately, 70% of these cases are being referred to treatment at the Bamrasnaradura Infectious Disease Institute (BIDI) on the MOPH campus. After Dr. Carlo Urbani, the WHO physician investigating early SARS cases in Vietnam was admitted to the hospital and subsequently died, the MOPH realized they needed to build an adequate High Consequence Pathogen isolation facility. Since developing this ward, they have cared for patients with H5N1, H1N, MDR-TB, MERS-CoV, and now 2019-nCoV.

Eileen Dunne, the Director of the DHAP/Thailand research team inquired with me about the possibility

(b) (4), (b) (5)

Anyway, given that you are coming to Thailand in the near future, if you are interested, I would like to see if I can get permission to have you tour the BIDI High Consequence Pathogen isolation wards. We took DEPSEC Hargan and CDC DIR Redfield on tours of the facilities last year so they are used to having USG folks look at it. Obviously, the situation is vastly different this year but I have already floated the

[REDACTED] (b) (5)

[REDACTED]  
[REDACTED] We can also walk you through the virology lab and, if you have time, take you to the Silom Clinic.

Let me know what you think.

Warm regards,

John

John R. MacArthur, MD MPH

CAPT, USPHS

Director, Thailand MOPH - U.S. CDC Collaboration

Centers for Disease Control and Prevention, Bangkok, Thailand

Country Representative to Thailand, Department of Health and Human Services

Tel: (b) (6) | Fax: +66(0)2-580-0911 | Mobile: (b) (6)

(b) (6)

-----Original Message-----

From: Gonsahn, Stephanie (CDC/DDPHSIS/CGH/OD) (b) (6)

Sent: Wednesday, January 29, 2020 2:50 PM

To: Jernigan, Daniel B. (CDC/DDID/NCIRD/ID) <(b) (6)>; Bresee, Joseph (CDC/DDID/NCIRD/ID) (b) (6); Gogstad, Eric (CDC/DDID/NCIRD/ID) (b) (6)>; GDD-OUTBREAK (CDC) (b) (6)>; Olsen, Sonja (CDC/DDID/NCIRD/ID) (b) (6); CDC IMS 2019 NCOV DGMQ Staffing (b) (6); OMara, Elizabeth A. (CDC/DDPHSIS/CGH/OD) (b) (6)>; Marston, Barbara J. (CDC/DDPHSIS/CGH/DPDM) (b) (6) Martin, Rebecca (CDC/DDPHSIS/CGH/OD) (b) (6)>

Subject: FW: 2019 NOVEL CORONAVIRUS RESEARCH

UNCLASSIFIED

[STATE SEAL]

Info Office: MGMT\_HEALTH, CDC, CDC\_SBU

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MRN: 20 STATE

9464<<http://repository.state.gov/searchcenter/Results.aspx?k=mrn%3a%2220%20STATE%209464%22>>

Date/DTG: Jan 29, 2020 / 291938Z JAN 20

From: SECSTATE WASHDC

Action: BEIJING, AMEMBASSY IMMEDIATE; CHENGDU, AMCONSUL IMMEDIATE; SHANGHAI, AMCONSUL IMMEDIATE; GUANGZHOU, AMCONSUL IMMEDIATE; SHENYANG, AMCONSUL IMMEDIATE

E.O.: 13526

TAGS: ASEC, SHLH, CDC, HHS, NIH, PGOV, SENV, PREL, CASC, KSCA, TBIO, TSPL, OPRC, OSCI, CN



Reference: 20 BEIJING

204<<http://repository.state.gov/searchcenter/Results.aspx?k=mrn%3a%2220%20BEIJING%20204%22>>

Subject: 2019 NOVEL CORONAVIRUS RESEARCH

1. Summary: The National Institute of Allergy and Infectious Diseases (NIAID) of the National Institutes of Health (NIH), Department of Health and Human Services (HHS) appreciates Post's extensive reporting on the 2019 novel coronavirus (nCoV). This message provides information on research NIAID is conducting in relation to nCoV and requests Post's advice (Paragraph 6) on fostering additional nCoV research collaboration with Chinese scientists. End Summary.

2. NIH sincerely appreciates the continuing stream of reftel reporting on the emergence of a new coronavirus (nCoV). These timely and well-prepared reports have been helpful as the NIH National Institute of Allergy and Infectious Diseases (NIAID) has initiated an aggressive research program as part of its mandate to execute the research response to emerging infectious diseases.

3. With a newly emergent virus, the potential scope of research is broad. However, given the urgency of the public health response, research that informs efforts to control transmission and mitigate morbidity and mortality, including medical countermeasure (MCM) development, are the priority. Though much of this work can be started based on the genome sequence that was made publicly available, it is critical to have access to viral isolates obtained from human cases, as well as biological specimens from infected persons.

4. NIAID's research priorities include optimizing the growth of the virus in a laboratory setting, so that the virus can be well characterized. This research also is essential to the development and testing of MCM. Another priority is to develop animal models that replicate human disease, as this is a vital early step

toward understanding disease pathogenesis and testing MCM efficacy. Based on the SARS and MERS experience, we anticipate that the development of animal models may be difficult. In addition, the development of a safe and effective nCoV vaccine is a high priority to prevent future outbreaks of this virus. Having developed vaccine candidates for MERS, SARS and other coronaviruses, investigators at the NIAID Vaccine Research Center, the NIAID Rocky Mountain Laboratories, as well as scientists in U.S. universities and other institutions are well positioned for similar success in response to this outbreak.

5. NIAID is reaching out to international collaborators, including those in China, to explore their interest in nCoV research collaboration, including the sharing of research data, viral isolates and other biological samples. Without access to these samples, critical research to respond to and end this outbreak could be delayed. With cases in the U.S., the need for samples from overseas recedes; but the value of research cooperation remains. With the current outbreak becoming a global health security concern, we request that Embassy Beijing continue to advocate with the Chinese health authorities for openness and a willingness to participate in international research that may even involve data and material sharing.

6. Post advice is requested to enable collaborative studies with Chinese scientists who have access to the virus and an interest in the development of diagnostics, therapeutics and vaccines. If there are specific suggestions about how NIAID might further engage Chinese scientists to advance research collaboration, NIAID will appreciate Post's advice and assistance. Advice may include specific names and contact information for scientists and scientific leaders whom NIAID should contact.

7. Questions related to NIAID's nCoV research activities and international collaborations may be directed to:

F. Gray Handley

Associate Director for International Research Affairs NIAID/NIH

Phone: (b) (6)

Email: (b) (6)

Signature: Pompeo

---

Drafted By: HHS/NIH/NIAID/OGR: JENG 301-761-7535

Cleared By: HHS/NIH/NIAID: JDOMINIQUE

HHS/NIH/NIAID: WROSA

Approved By: HHS/NIH/NIAID: FGHANDLEY

Released By: IRM\_OPS\_MSO (b) (6)

Info: [ENGJ2@NIH.GOV](mailto:ENGJ2@NIH.GOV) ROUTINE; [HANDLEYGR@NIH.GOV](mailto:HANDLEYGR@NIH.GOV) ROUTINE;  
[ROSAWI@NIH.GOV](mailto:ROSAWI@NIH.GOV) ROUTINE; DEPT OF HHS WASHINGTON DC ROUTINE

---

Action Post: NONE

Dissemination Rule: DIS\_MGMT\_HEALTH, DIS\_CDC\_INTEREST

UNCLASSIFIED



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Thu, 23 Jan 2020 23:41:51 +0000  
**To:** Morabito, Kaitlyn (NIH/VRC) [E]  
**Cc:** Chen, Grace (NIH/NIAID) [E]; Bok, Karin (NIH/VRC) [E]  
**Subject:** RE: 2 questions from earlier

If Julie McElrath can do the (b) (5), I would trust that, but otherwise (b) (5) should be shipped here.

BG

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**From:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >  
**Sent:** Thursday, January 23, 2020 6:40 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Cc:** Chen, Grace (NIH/NIAID) [E] (b) (6) >; Bok, Karin (NIH/VRC) [E] (b) (6) >  
**Subject:** Re: 2 questions from earlier

Yes, I was thinking that they would be processed on site, and we would be shipped vials (b) (5)

-Kaitlyn

On Jan 23, 2020, at 6:28 PM, Graham, Barney (NIH/VRC) [E] <(b) (6) > wrote:

It is probably best to send the (b) (5) for processing. I'm not sure we can have staff available at the moment it arrives.

BG

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**From:** Chen, Grace (NIH/NIAID) [E] (b) (6) >  
**Sent:** Thursday, January 23, 2020 2:32 PM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6) >  
**Cc:** Morabito, Kaitlyn (NIH/VRC) [E] (b) (6) >; Bok, Karin (NIH/VRC) [E] (b) (6) >  
**Subject:** FW: 2 questions from earlier

Hi Barney,

FYI that Hilary has looped me in on the logistics of [REDACTED] (b) (5)

Thanks,  
Grace

**From:** Chen, Grace (NIH/NIAID) [E]

**Sent:** Thursday, January 23, 2020 1:35 PM

**To:** Marston, Hilary (NIH/NIAID) [E] [REDACTED] (b) (6)>

**Cc:** Pillai, Satish K. (CDC/DDID/NCEZID/DPEI) [REDACTED] (b) (6); Lindquist, Scott SL (CDC [doh.wa.gov](https://doh.wa.gov))

[REDACTED] (b) (6)>; DOH-IC (DOH) <[doh-ic@doh.wa.gov](mailto:doh-ic@doh.wa.gov)>; Embry, Alan (NIH/NIAID) [E]

[REDACTED] (b) (6)>; Uyeki, Timothy M. (CDC/DDID/NCIRD/ID) [REDACTED] (b) (6)>; Patel, Anita

(CDC/DDID/NCIRD/OD) <[REDACTED] (b) (6)>; Lerner, Andrea (NIH/NIAID) [E] [REDACTED] (b) (6)>;

Gordon, Ingelise (NIH/VRC) [E] [REDACTED] (b) (6)>

**Subject:** Re: 2 questions from earlier

Thank you Hilary.

Satish- we have an existing protocol to either [REDACTED] (b) (5)  
[REDACTED] that would be helpful.

Happy to talk more if needed as well and copying Ingelise Gordon from the VRC as well so that we can work out the logistics.

Thanks!  
Grace

On Jan 23, 2020, at 1:15 PM, Marston, Hilary (NIH/NIAID) [E] <[REDACTED] (b) (6)> wrote:

Satish thanks so much for connecting us. As Satish mentioned, we would be quite interested in [REDACTED] (b) (5)  
[REDACTED] (b) (5)

I am looping in my colleague Grace Chen from the Vaccine Research Center. She is head of their Clinical Trial's Program and the PI for the relevant protocol and would be able to offer details on logistics/etc.

Thanks for considering,

Hilary Marston

Hilary D. Marston, MD, MPH  
Medical Officer and Policy Advisor for Global Health  
Immediate Office of the Director  
National Institute of Allergy and Infectious Diseases  
Cell: [REDACTED] (b) (6)

Email: (b) (6)

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**From:** Pillai, Satish K. (CDC/DDID/NCEZID/DPEI) <(b) (6)>  
**Sent:** Wednesday, January 22, 2020 8:25 PM  
**To:** Lindquist, Scott SL (CDC [doh.wa.gov](mailto:doh.wa.gov)) (b) (6); DOH-IC (DOH) <[doh-ic@doh.wa.gov](mailto:doh-ic@doh.wa.gov)>; Marston, Hilary (NIH/NIAID) [E] (b) (6); Embry, Alan (NIH/NIAID) [E] (b) (6)>  
**Cc:** Uyeki, Timothy M. (CDC/DDID/NCIRD/ID) (b) (6); Patel, Anita (CDC/DDID/NCIRD/OD) (b) (6)>  
**Subject:** FW: 2 questions from earlier

Hi Scott, Kevin –

Wanted to loop back on the various inquiries you've received from academia and other potential collaborators regarding vaccine and other similar topics. Colleagues from NIH, Drs. Marston and Embry, have graciously offered to serve as POCs for triaging these inquiries.

Dr. Marston also raised something that I wanted to share for your guidance and recommendation: NIH would be interested in (b) (5)

(b) (5)  
(b) (5) I indicated that I was going to defer to you, Kevin Wickersham and Scott Lindquist.

Thanks so much,  
Satish

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**From:** Pillai, Satish K. (CDC/DDID/NCEZID/DPEI) (b) (6)>  
**Sent:** Wednesday, January 22, 2020 7:41 PM  
**To:** Embry, Alan (NIH/NIAID) [E] (b) (6); Marston, Hilary (NIH/NIAID) [E] (b) (6)  
**Cc:** Patel, Anita (CDC/DDID/NCIRD/OD) (b) (6); Uyeki, Timothy M. (CDC/DDID/NCIRD/ID) (b) (6); Cohn, Amanda (CDC/DDID/NCIRD/OD) (b) (6)  
**Subject:** FW: 2 questions from earlier

Dear Hilary, Alan –

I'm currently in the field supporting Washington State colleagues in the CDC 2019 novel coronavirus investigation. Our state health colleagues are receiving many calls from groups and individuals interested in collaborating with the state on potential MCM/vaccine work. Given they are actively responding, and this is not directly related to their public health response, I was wondering if there were other federal initiatives that some of these individuals could be directed towards (e.g., is there a research consortium already engaged in some of these topics?). In corresponding with Tim, he shared your names as potential contacts that might be able to assist in thinking this through. Any assistance would be appreciated in helping coordinating what I assume is a broader interest in this topic. I can put you in touch with the state POCs, if helpful.

Best,

Satish

---

**From:** DOH-IC (DOH) <[doh-ic@doh.wa.gov](mailto:doh-ic@doh.wa.gov)>  
**Sent:** Wednesday, January 22, 2020 2:10 PM  
**To:** Pillai, Satish K. (CDC/DDID/NCEZID/DPEI) (b) (6)>  
**Subject:** 2 questions from earlier  
**Importance:** High

Hi Satish,

Thank you for your assistance on the two issues we discussed earlier:

- Arranging a single point of contact at NIH for researchers to contact with questions regarding obtaining samples for research
- A point of contact at CDC (DGMQ or similar) who would be willing to speak with a WA state representative regarding the airport screening and flight rerouting

I just wanted to touch base with you quickly as a reminder. Please let me know what you and your colleagues come up with! Thank you again for your assistance in this!

All the best,  
Kevin Wickersham  
(b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Sun, 5 Apr 2020 15:49:59 +0000  
**To:** Mark H. Wener  
**Cc:** Corbett, Kizzmekia (NIH/VRC) [E]; Thornburg, Natalie (CDC/DDID/NCIRD/DVD); Johnson, Jeff (CDC/DDID/NCHHSTP/DHPSE); Chihiro Morishima; Anu Chaudhary; Susan L. Fink  
**Subject:** Re: NIH (b) (4)

We will also be looking at (b) (4)  
(b) (4)

Barney

Sent from my iPhone

On Apr 5, 2020, at 11:44 AM, Mark H. Wener (b) (6) > wrote:

Thank you, thank you so much! We plan to get started right away.  
I took a quick look at the SOP and see and appreciate all the careful work you have put into (b) (4). Thank you for sharing.

Thanks again.  
Mark  
Mark Wener, MD  
Professor



Department of Laboratory Medicine  
Adjunct, Department of Medicine  
University of Washington  
Seattle, WA 98195  
phone (b) (6)

**From:** Corbett, Kizzmekia (NIH/VRC) [E] <(b) (6)>

**Sent:** Sunday, April 5, 2020 7:44 AM

**To:** Thornburg, Natalie (CDC/DDID/NCIRD/DVD) (b) (6)>; Graham, Barney (NIH/VRC) [E]  
(b) (6)

**Cc:** Mark H. Wener (b) (6); Johnson, Jeff (CDC/DDID/NCHHSTP/DHPSE) (b) (6)  
Chihiro Morishima (b) (6)>; Anu Chaudhary (b) (6)

**Subject:** Re: NIH (b) (4)

Good morning Natalie,

I am attaching the updated SOP and slides that show how we optimized each step so that you all are aware (b) (4)

--

**Kizzmekia S. Corbett, PhD**

**Senior Research Fellow | Scientific Lead**

**Coronavirus Vaccines & Immunopathogenesis (coVip) Team**

Viral Pathogenesis Laboratory | Vaccine Research Center

National Institutes of Allergy and Infectious Diseases

National Institutes of Health

Building 40 Room 2608

40 Convent Drive

Bethesda MD 20892

Laboratory: (b) (6)

Personal: (b) (6)

Fax: (301) 480-2771

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**From:** "Thornburg, Natalie (CDC/DDID/NCIRD/DVD)" <(b) (6)>

**Date:** Sunday, April 5, 2020 at 10:37 AM

**To:** Barney Graham (b) (6)>

**Cc:** "Mark H. Wener" (b) (6), "Johnson, Jeff (CDC/DDID/NCHHSTP/DHPSE)"  
(b) (6)>, Chihiro Morishima (b) (6) Anu Chaudhary (b) (6)>,  
"Stein, Judy (NIH/VRC) [C]" (b) (6), Kizzmekia Corbett

(b) (6)>

**Subject:** RE: NIH (b) (4)

I will share the SOP, thanks.

(b) (4)

(b) (4) Once we get the final conditions set, I'll share that with you.

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**From:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Sent:** Sunday, April 5, 2020 10:33 AM  
**To:** Thornburg, Natalie (CDC/DDID/NCIRD/DVD) (b) (6)>  
**Cc:** Mark H. Wener (b) (6); Johnson, Jeff (CDC/DDID/NCHHSTP/DHPSE) (b) (6);  
Chihiro Morishima (b) (6)>; Anu Chaudhary (b) (6); Stein, Judy (NIH/VRC) [C]  
(b) (6)>; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>  
**Subject:** Re: NIH (b) (4)

Thanks Natalie. Please feel free to send. Do they want our SOP? If so it is attached.

Barney

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 7 Apr 2020 13:11:45 +0000  
**To:** Steven T. Smith  
**Cc:** Handley, Gray (NIH/NIAID) [E]; Marston, Hilary (NIH/NIAID) [E]; Dominique, Joyelle (NIH/NIAID) [E]  
**Subject:** Re: Excerpt from WHO Press Briefing April 6 regarding vaccines

Thanks (b) (6) good to see the strong pushback on those statements about Africa.

Barney

Sent from my iPhone

On Apr 7, 2020, at 8:56 AM, (b) (6) wrote:

[https://www.who.int/docs/default-source/coronaviruse/transcripts/who-audio-emergencies-coronavirus-press-conference-full-06apr2020-final.pdf?sfvrsn=7753b813\\_2](https://www.who.int/docs/default-source/coronaviruse/transcripts/who-audio-emergencies-coronavirus-press-conference-full-06apr2020-final.pdf?sfvrsn=7753b813_2)

Maria van Kerkhove: I'll answer the question around vaccines. What we can say is that there are a number of vaccines that are in development and vaccines will be tested through clinical trials with all ethical considerations in place in whichever populations are under study with informed consent, with open and transparent communication. This is of the utmost importance, that not only do we have strong, robust scientific evidence but we ensure that all of the studies that are done are done with appropriate and the highest level of ethical considerations. ...

DG Tedros: But we will support the African Union, we will support the Africa CDC and also we will continue working through our WHO regional office in Congo Brazzaville and continue to support and fight the pandemic together.

Then on the vaccines issue there was, I think, a comment last week from a couple of scientists who said the testing ground for the new vaccines will be Africa. To be honest, I was so appalled and it was a time when I said, when we needed solidarity these kind of racist remarks actually would not help, it goes against the solidarity. Africa cannot and will not be a testing ground for any vaccine. We will follow all the rules to test any vaccine or therapeutics all over the world using exactly the same rules. Whether it's in Europe, Africa or wherever we will use the same protocol and if there is a need to be tested elsewhere to treat human beings the same way, equally. The hangover from a colonial mentality has to stop -- and WHO will not allow this to happen. It was a disgrace actually and appalling to hear during the 21st century from scientists that kind of remark and we condemn this in the strongest terms possible but we assure you that this will not happen in Africa and will not happen elsewhere, in any country. Proper protocols will be followed and human beings will be treated as human beings because we're all human beings.



Then after saying this the vaccine development; we're addressing two issues and we will be announcing as soon as possible, hopefully during this week, a big initiative to accelerate the research and development and production of vaccines and also design mechanisms for equitable distribution of the vaccines. While we're looking for vaccines, unless we break the barriers to equitable distribution of the products, whether it's vaccines or therapeutics, we will have a problem, so we need to address the problem ahead of time, we need to address the problem of access or challenges to access ahead of time. That's why we will put together a mechanism and we will appoint senior people from the North and South that will work out the details on how they can accelerate production but at the same time how they can ensure equitable distribution. Solidarity is very important here. When a vaccine or a medicine is ready we have to be able to deliver it all over the world. There should not be a divide between the haves and the have-nots. If we say solidarity, solidarity should be in its full form and I hope each and every individual, each and every human being will go for that kind of solidarity. I thank you.

(b) (6)

**Representative of NIH/National Institute of Allergy and Infectious Diseases**

United States Mission to the United Nations and other International Organizations  
Geneva, Switzerland

(b) (6)

**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Mon, 9 Mar 2020 14:07:35 +0000  
**To:** Mittelman, Abraham (NIH/VRC) [C]  
**Subject:** RE: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

Can we pay for a building and space with the first \$100M?

BG

---

**From:** Mittelman, Abraham (NIH/VRC) [C] (b) (6)>  
**Sent:** Monday, March 9, 2020 10:02 AM  
**To:** Daucher, Marybeth (NIH/NIAID) [E] (b) (6); Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** Mueller, Mark (NIH/NIAID) [E] (b) (6)>; Wilson, Hope (NIH/VRC) [E] (b) (6)>; Bok, Karin (NIH/VRC) [E] (b) (6); Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)>; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>; Carlton, Kevin (NIH/VRC) [E] (b) (6); Gupta, Shanker (NIH/VRC) [E] (b) (6)  
**Subject:** RE: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

Hi Marybeth:

The Congressional authorization encompasses 5 year funds, remaining available until September 30, 2024. Since contract funds can be allocated for the term of the contract (up to an additional 5 year period once obligated) before returning to the US Treasury, would suggest also confirming with Martin regarding creating a 10 year chart (e.g., rolling obligations, with the final 2024 funds obligated in 2024 and spent out by up to 2029).

Best wishes

Abe

---

**From:** Daucher, Marybeth (NIH/NIAID) [E] <(b) (6)>  
**Sent:** Monday, March 9, 2020 9:42 AM  
**To:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Cc:** Mueller, Mark (NIH/NIAID) [E] (b) (6)>; Wilson, Hope (NIH/VRC) [E] (b) (6)>; Mittelman, Abraham (NIH/VRC) [C] (b) (6)>; Bok, Karin (NIH/VRC) [E] <(b) (6)>; Morabito, Kaitlyn (NIH/VRC) [E] (b) (6)>; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>; Carlton, Kevin (NIH/VRC) [E] (b) (6); Gupta, Shanker (NIH/VRC) [E] (b) (6)>  
**Subject:** RE: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

That is my current understanding but not confirmed.



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**From:** Graham, Barney (NIH/VRC) [E] (b) (6)>  
**Sent:** Monday, March 9, 2020 9:41 AM  
**To:** Daucher, Marybeth (NIH/NIAID) [E] (b) (6)>  
**Cc:** Mueller, Mark (NIH/NIAID) [E] <(b) (6)>; Wilson, Hope (NIH/VRC) [E] (b) (6)>; Mittelman, Abraham (NIH/VRC) [C] (b) (6)>; Bok, Karin (NIH/VRC) [E] (b) (6)>; Morabito, Kaitlyn (NIH/VRC) [E] <(b) (6)>; Corbett, Kizzmekia (NIH/VRC) [E] (b) (6)>; Carlton, Kevin (NIH/VRC) [E] (b) (6) Gupta, Shanker (NIH/VRC) [E] (b) (6)>  
**Subject:** Re: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

That's over 5 years?

BG

Sent from my iPhone

On Mar 9, 2020, at 9:38 AM, Daucher, Marybeth (NIH/NIAID) [E] (b) (6)> wrote:

Dear team,  
Please see the attached CoV spending plan outline for NIAID. The VRC would likely receive about \$240M for vaccine work. Please review the attached document, provide any advice (you can respond directly to this email) about assumptions and spending categories.

**Please respond by noon today**

Thanks  
MB

---

**From:** Johnson, Martin S. (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, March 9, 2020 8:19 AM  
**To:** Daucher, Marybeth (NIH/NIAID) [E] (b) (6); Blaney, Joe (NIH/NIAID) [C] (b) (6)>; McNay, Laura (NIH/NIAID) [E] (b) (6)>  
**Subject:** FW: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

Marybeth, Joe, Laura,

I have not yet sent this. Please advise this morning if there is anything significant you would like to add in this PLAN, with the understanding that it is subject to change.

I am assuming that most personnel increases would be through contractors.

---

**From:** Johnson, Martin S. (NIH/NIAID) [E]  
**Sent:** Friday, March 6, 2020 4:51 PM  
**To:** Fauci, Anthony (NIH/NIAID) [E] <(b) (6)>; Auchincloss, Hugh (NIH/NIAID) [E] <(b) (6)>; Harper, Jill (NIH/NIAID) [E] <(b) (6)>; Crum, Wayne (NIH/NIAID) [E] <(b) (6)>; Marston, Hilary (NIH/NIAID) [E] <(b) (6)>; Eisinger, Robert (NIH/NIAID) [E] <(b) (6)>; Lerner, Andrea (NIH/NIAID) [E] <(b) (6)>; Conrad, Patricia (NIH/NIAID) [E] <(b) (6)>; Gilles, Sharon (NIH/NIAID) [E] <(b) (6)>  
**Cc:** Law, Kim (NIH/NIAID) [E] <(b) (6)>; Lee, Kun-Lin (NIH/NIAID) [E] <(b) (6)>; Lam, Anh (NIH/NIAID) [E] <(b) (6)>  
**Subject:** RE: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

Tony,

The Department needs a spend plan for the \$826M and a brief narrative which I've attached. They want this today.

The narrative is a condensed version of what we have discussed previously while the table is identical to what we have been updating weekly.

Please advise if this is Ok to send forward.

Thanks

Martin

---

**From:** Shaya, Cecile (NIH/OD) [E] <(b) (6)>  
**Sent:** Friday, March 6, 2020 11:10 AM  
**To:** Johnson, Martin S. (NIH/NIAID) [E] <(b) (6)>; Crum, Wayne (NIH/NIAID) [E] <(b) (6)>; Redman, Scott (NIH/NIEHS) [E] <(b) (6)>  
**Cc:** Harper, Jill (NIH/NIAID) [E] <(b) (6)>; Long, Christopher (NIH/NIEHS) [E] <(b) (6)>; Shapiro, Neil (NIH/OD) [E] <(b) (6)>; Conroy, Glenda (NIH/OD) [E] <(b) (6)>  
**Subject:** RE: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

Hello Martin,

I asked and ASFR said no. Please submit the spend plan as soon as possible. In addition, please fill out IC information in the setup form so OFM and NBS can setup the 5-year accounts for NIAID and NIEHS. OB can make 30-day automatic apportionment available once the accounts are setup, so there won't be too many CAN flips. Also, if NIAID has edits to the draft apportionment that we sent yesterday, please provide as soon as possible. We are the only OpDiv that has not submitted. As you know the sooner we submit the apportionment, the sooner OMB approves it.

Thanks, Martin.

Cecile

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**From:** Johnson, Martin S. (NIH/NIAID) [E] <(b) (6)>  
**Sent:** Thursday, March 5, 2020 5:09 PM  
**To:** Shaya, Cecile (NIH/OD) [E] (b) (6)>; Crum, Wayne (NIH/NIAID) [E] (b) (6); Redman, Scott (NIH/NIEHS) [E] (b) (6)>  
**Cc:** Harper, Jill (NIH/NIAID) [E] (b) (6)>; Long, Christopher (NIH/NIEHS) [E] (b) (6)>; Shapiro, Neil (NIH/OD) [E] (b) (6)  
**Subject:** RE: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

Cecile,

Monday cob would allow us sufficient time to update, review and clear.

Thanks

Martin

---

**From:** Shaya, Cecile (NIH/OD) [E] (b) (6)>  
**Sent:** Thursday, March 5, 2020 4:58 PM  
**To:** Johnson, Martin S. (NIH/NIAID) [E] <(b) (6)>; Crum, Wayne (NIH/NIAID) [E] (b) (6)>; Redman, Scott (NIH/NIEHS) [E] (b) (6)  
**Cc:** Harper, Jill (NIH/NIAID) [E] (b) (6)>; Long, Christopher (NIH/NIEHS) [E] (b) (6)>; Shapiro, Neil (NIH/OD) [E] (b) (6)  
**Subject:** RE: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

It takes a few weeks for HHS and OMB to clear a document. How much more time do you need so I can submit a request?

---

**From:** Johnson, Martin S. (NIH/NIAID) [E] <(b) (6)>  
**Sent:** Thursday, March 5, 2020 4:53 PM  
**To:** Shaya, Cecile (NIH/OD) [E] <(b) (6)>; Crum, Wayne (NIH/NIAID) [E] (b) (6)>; Redman, Scott (NIH/NIEHS) [E] <(b) (6)>  
**Cc:** Harper, Jill (NIH/NIAID) [E] (b) (6)>; Long, Christopher (NIH/NIEHS) [E] (b) (6)>; Shapiro, Neil (NIH/OD) [E] <(b) (6)>  
**Subject:** RE: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

Cecile,

We need more time because I'm not sure when we will get to see Dr. Fauci so he can clear it.

If we have 30 days from enactment could you help me understand the need to get this turned around maybe a day after its enacted ?

Thanks

---

**From:** Shaya, Cecile (NIH/OD) [E] (b) (6)  
**Sent:** Thursday, March 5, 2020 4:35 PM  
**To:** Johnson, Martin S. (NIH/NIAID) [E] (b) (6); Crum, Wayne (NIH/NIAID) [E] (b) (6); Redman, Scott (NIH/NIEHS) [E] (b) (6)>  
**Cc:** Harper, Jill (NIH/NIAID) [E] (b) (6); Long, Christopher (NIH/NIEHS) [E] (b) (6); Shapiro, Neil (NIH/OD) [E] (b) (6)>  
**Subject:** FW: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6  
**Importance:** High

Hello all,

Please see below. Could you provide by 3pm tomorrow? Please let me know if you need more time.

Thanks,  
Cecile

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**From:** Cabezas, Miriam (HHS/ASFR) (b) (6)  
**Sent:** Thursday, March 5, 2020 4:30 PM  
**To:** Berger, Sherri (CDC/OCOO/OD) (b) (6); Kelly, Alison (CDC/OCOO/OFR/OA) (b) (6); Capozzola, Christa (CDC/OCOO/OFR) <(b) (6)> Petillo, Jay (OS/ASPR/MFHC) (b) (6); Dubay, Johanna (OS/ASPR/MFHC) (b) (6); Shapiro, Neil (NIH/OD) [E] (b) (6); Shaya, Cecile (NIH/OD) [E] (b) (6); Tootle, William (FDA/OC) (b) (6); Tyler, James (FDA/OC) <(b) (6)> DeVoss, Elizabeth (HRSA) (b) (6)>  
**Cc:** Mueller, Erin O (HHS/ASFR) (b) (6); Goyle, Suraj (OS/ASFR) (b) (6); Falisi, Angela (OS/ASFR) (b) (6); Claude, Rachel (HHS/ASFR) (b) (6); White, RaeShawn (OS/ASFR) <(b) (6)> Powell, Natalie (OS/ASFR) (b) (6); Cormier, Justin (HHS/ASFR) (b) (6)  
**Subject:** RE: Coronavirus Supplemental Spend Plan Guidance - Due 5 PM 3/6

Good evening – We are accelerating the deadline to **5 pm tomorrow Friday 3/6**. Please let us know if you anticipate any challenges.

Miriam

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**From:** Cabezas, Miriam (HHS/ASFR)  
**Sent:** Thursday, March 5, 2020 2:37 PM  
**To:** Berger, Sherri (CDC/OCOO/OD) (b) (6); Kelly, Alison (CDC/OCOO/OFR/OA) (b) (6); Capozzola, Christa (CDC/OCOO/OFR) (b) (6); Petillo, Jay (OS/ASPR/MFHC) (b) (6); Dubay, Johanna (OS/ASPR/MFHC) <(b) (6)> Shapiro, Neil (NIH/OD) [E] (b) (6); Shaya, Cecile (NIH/OD) [E] (b) (6); Tootle, William (FDA/OC) (b) (6); Tyler, James (FDA/OC) <(b) (6)> DeVoss, Elizabeth (HRSA) (b) (6)>



**Cc:** Mueller, Erin O (HHS/ASFR) (b) (6); Goyle, Suraj (OS/ASFR) (b) (6)  
(b) (6)>; Falisi, Angela (OS/ASFR) (b) (6)>; Claude, Rachel (HHS/ASFR)  
(b) (6)>; White, RaeShawn (OS/ASFR) (b) (6)>; Powell, Natalie  
(OS/ASFR) (b) (6)>; Cormier, Justin (HHS/ASFR) (b) (6)>  
**Subject:** Coronavirus Supplemental Spend Plan Guidance - Due 4 PM 3/9

Good afternoon –

In preparation for the enactment of the Coronavirus Preparedness and Response Supplemental Act, 2020, we are requesting agency spend plans by **4 PM Monday, March 9<sup>th</sup>**. Please use the attached template to provide details on anticipated uses of funds including administrative costs and mechanisms. Spend plans should be cleared by agency leadership. These documents will be used to meet the HHS spend plan requirement in the supplemental (due 30 days post enactment) and will be reviewed by OMB. The second page of the template requests additional detail on obligations, program costs, and administrative costs. We will use this additional information for internal purposes.

Please let us know if you have any questions or anticipate any concerns meeting the deadline.

Miriam

Miriam G. Cabezas  
U.S. Department of Health and Human Services  
Office of the Secretary | ASFR | Office of Budget  
(b) (6) | (b) (6)

<Agency COVID Projected Obligations HHS\_Template\_NIH\_NIAID\_3\_6\_2020.pdf>  
<COVID Agency Spend Plan Narrative\_NIAID\_for\_HHS\_3\_6\_2020\_FINAL.pdf>



**From:** Graham, Barney (NIH/VRC) [E]  
**Sent:** Tue, 21 Apr 2020 14:31:16 +0000  
**To:** Bok, Karin (NIH/VRC) [E]  
**Cc:** Gall, Jason (NIH/VRC) [C]  
**Subject:** RE: Vaccine Assessment Table VERSION 2 - for your input

Thanks Karin,

Here is my abbreviated top seven, either by company or by concept.

(b) (5)

(b) (5)

Here are some edits for your email.

*"Dear Armen,*

*Thank you for sharing the vaccine ranking table with us. We believe we have made progress in the ranking of the many candidates, but there are still key factors to consider:*

(b) (5)

*We very much appreciate BARDA leading this exercise, it is an excellent way of making us look at the whole picture in advance of key decisions.*

*Thank you!*

*Karin.”*

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**From:** Bok, Karin (NIH/VRC) [E] (b) (6)  
**Sent:** Tuesday, April 21, 2020 8:55 AM  
**To:** Graham, Barney (NIH/VRC) [E] <(b) (6)>  
**Cc:** Gall, Jason (NIH/VRC) [C] (b) (6)  
**Subject:** Re: Vaccine Assessment Table VERSION 2 - for your input

Barney,

I need to send our feedback to this by noon today. Would you mind sending edits to the email below soon? And we could may be add (b) (5)?

(b) (5)

Thank you!

Karin.

Karin Bok, MS, PhD  
Senior Advisor, Vaccine Development  
Office of the Director, Vaccine Research Center

National Institute of Allergy and Infectious Diseases

National Institutes of Health

phone: (b) (6) | mobile: (b) (6) | email: (b) (6)

<https://www.niaid.nih.gov/about/vrc>

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**From:** Karin Bok (b) (6)  
**Date:** Monday, April 20, 2020 at 12:55 PM  
**To:** "Graham, Barney (NIH/VRC) [E]" (b) (6)  
**Cc:** "Gall, Jason (NIH/VRC) [C]" (b) (6) >  
**Subject:** FW: Vaccine Assessment Table VERSION 2 - for your input

**Barney,**

**I am thinking of answering Armen with the next email: the attached is a better version of the ranking compared to the one I sent this morning.**

*"Dear Armen,*

*Thank you for sharing the vaccine ranking table with us. We believe we have made progress in the ranking of the many candidates, but there are still key factors to consider:*

(b) (5)

*We very much appreciate BARDA leading this exercise, it is an excellent way of making us look at the whole picture in advance of key decisions.*

Thank you!

Karin."

Karin Bok, MS, PhD  
Senior Advisor, Vaccine Development  
Office of the Director, Vaccine Research Center  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health  
phone: (b) (6) | mobile: (b) (6) | email: (b) (6)  
<https://www.niaid.nih.gov/about/vrc>

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**From:** "Donabedian, Armen (OS/ASPR/BARDA)" (b) (6)  
**Date:** Monday, April 20, 2020 at 12:20 PM  
**To:** Karin Bok <(b) (6)>  
**Cc:** "Arnold, Frank (OS/ASPR/BARDA) (CTR)" (b) (6), "Seals, Jonathan (OS/ASPR/BARDA)" <(b) (6)>, "Wolfe, Daniel (OS/ASPR/BARDA)" <(b) (6)>  
**Subject:** RE: Vaccine Assessment Table VERSION 2 - for your input

Karin,

Here it is!

Armen

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**From:** Bok, Karin (NIH/VRC) [E] (b) (6)  
**Sent:** Monday, April 20, 2020 12:15 PM  
**To:** Weinbaum, Cindy (CDC/DDID/NCIRD/ISD) (b) (6); Donabedian, Armen (OS/ASPR/BARDA) (b) (6); Roberts, Jeff (FDA/CBER) <(b) (6)>; Stemmy, Erik (NIH/NIAID) [E] (b) (6); Taylor, Kimberly (NIH/NIAID) [E] (b) (6)  
**Cc:** Arnold, Frank (OS/ASPR/BARDA) (CTR) (b) (6); Houchens, Christopher (OS/ASPR/BARDA) <(b) (6)>; Johnson, Robert (OS/ASPR/BARDA) (b) (6); Seals, Jonathan (OS/ASPR/BARDA) (b) (6); Wolfe, Daniel (OS/ASPR/BARDA) (b) (6); Cassetti, Cristina (NIH/NIAID) [E] (b) (6)  
**Subject:** Re: Vaccine Assessment Table VERSION 2 - for your input

Armen,

We were anticipating the sub-group ranked table to send feedback.

Thank you,

Karin.

Karin Bok, MS, PhD

Senior Advisor, Vaccine Development

Office of the Director, Vaccine Research Center

National Institute of Allergy and Infectious Diseases

National Institutes of Health

phone: (b) (6) mobile: (b) (6) | email: (b) (6)

<https://www.niaid.nih.gov/about/vrc>

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**From:** "Weinbaum, Cindy (CDC/DDID/NCIRD/ISD)" (b) (6) >

**Date:** Monday, April 20, 2020 at 12:00 PM

**To:** "Donabedian, Armen (OS/ASPR/BARDA)" (b) (6) >, Karin Bok  
(b) (6), "Roberts, Jeff (FDA/CBER)" (b) (6) >, "Stemmy, Erik  
(NIH/NIAID) [E]" (b) (6) >, "Taylor, Kimberly (NIH/NIAID) [E]"  
(b) (6) >

**Cc:** "Arnold, Frank (OS/ASPR/BARDA) (CTR)" (b) (6), "Houchens, Christopher  
(OS/ASPR/BARDA)" (b) (6), "Johnson, Robert (OS/ASPR/BARDA)"  
(b) (6) >, "Seals, Jonathan (OS/ASPR/BARDA)" <(b) (6)>,  
"Wolfe, Daniel (OS/ASPR/BARDA)" <(b) (6)>, "Cassetti, Cristina (NIH/NIAID)  
[E]" (b) (6)

**Subject:** RE: Vaccine Assessment Table VERSION 2 - for your input

CDC does not have feedback at this point and will happily review the ranked table.

Thanks –

Cindy.

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**From:** Donabedian, Armen (OS/ASPR/BARDA) (b) (6) >

**Sent:** Monday, April 20, 2020 11:50 AM

**To:** Bok, Karin (NIH/VRC) [E] <(b) (6)>; Roberts, Jeff (FDA/CBER)  
(b) (6); Weinbaum, Cindy (CDC/DDID/NCIRD/ISD) (b) (6) >; Stemmy, Erik  
(NIH/NIAID) [E] (b) (6); Taylor, Kimberly (NIH/NIAID) [E] (b) (6)

**Cc:** Arnold, Frank (OS/ASPR/BARDA) (CTR) (b) (6) >; Houchens, Christopher  
(OS/ASPR/BARDA) (b) (6), Johnson, Robert (OS/ASPR/BARDA)  
(b) (6) >; Seals, Jonathan (OS/ASPR/BARDA) (b) (6); Wolfe,  
Daniel (OS/ASPR/BARDA) <(b) (6)>; Cassetti, Cristina (NIH/NIAID) [E]  
(b) (6)

**Subject:** RE: Vaccine Assessment Table VERSION 2 - for your input



Karin, Cristina (and Erik), Jeff, and Cindy

Let me know if you are in the process of assessing vaccine platforms or are anticipating the sub-group ranked table. I won't send until you signal.

Best regards,  
Armen

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**From:** Donabedian, Armen (OS/ASPR/BARDA)

**Sent:** Saturday, April 18, 2020 4:56 PM

**To:** Biggins, Julia (MIL) <(b) (6)>; Bok, Karin (NIH/VRC) [E] (b) (6)  
Cassetti, Cristina (NIH/NIAID) [E] <(b) (6)>; Roberts, Jeff (FDA/CBER)  
(b) (6)>; Weinbaum, Cindy (CDC/DDID/NCIRD/ISD) (b) (6)

**Cc:** Arnold, Frank (OS/ASPR/BARDA) (CTR) <(b) (6)>; Houchens, Christopher  
(OS/ASPR/BARDA) (b) (6)>; Johnson, Robert (OS/ASPR/BARDA)  
<(b) (6)>; Seals, Jonathan (OS/ASPR/BARDA) (b) (6)>; Wolfe,  
Daniel (OS/ASPR/BARDA) (b) (6)>

**Subject:** Vaccine Assessment Table VERSION 2 - for your input

Dear Julia, Karin, Cristina, Jeff and Cindy,

Version 1 of the Vaccine Assessment Table was briefed to the Secretary and the COVID-19 Advisory Panel on Thursday, April 16. I'm told that (b) (5)

(b) (5)

Version 2 of the Vaccine Assessment Table Excel file has the following new features.

- 1.
- 2.
- 3.

(b) (5)

4.

a.

A sub-group will be working this weekend to score the technologies. Please let us know if you would be interested in review the subgroup scores or would like your colleagues to score. The sub-group is targeting completion on as soon as possible on Monday and we'd like to have the table scored (or vetted) by your agencies COB Tuesday.

<< File: Vaccine Assessment Table v2.1.xlsx >>

Best regards,

Armen

Armen M. Donabedian, PhD  
Scientific Technical Advisor and Chief, Vaccines  
Influenza and Emerging Infectious Diseases Division  
Biomedical Advanced Research and Development Authority

Office: (b) (6)  
Mobile: (b) (6)

(b) (6)